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Napoleon's Artillery

Text by ROBERT WILKINSON-LATHAM
Colour plates by MICHAEL ROFFE

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Introduction

At the end of the Royalist régime, the artillery arm of the French army was, as Napoleon was later to declare, '. . . the finest and best composed corps in Europe.' The future emperor was not only commenting on the *ésprit de corps* of the highly trained officers and men, all versed in the scientific art of gunnery; but also on the equipment, designed in a sturdy, simple, yet interchangeable form by the great master of artillery, Jean Baptiste de Gribeauval as far back as 1768.

The new constitution drawn up in 1790 made it obligatory for officers and men of the French army to swear an oath of allegiance or to resign. A number of the more senior and experienced officers and men were thereby lost, leaving the artillery sadly depleted. The only remedy was promotion from the ranks, but whereas the more experienced non-commissioned officers had detailed knowledge of gunnery, they at first lacked the necessary quality of leadership. There were few brilliant junior artillery officers who would take and use their own initiative in battle, although a number of outstanding senior officers rose from the ranks.

On 29 October 1790, the Artillery became a permanent arm of the service rather than a 'useful auxiliary' as Count Jacques de Guibert had written in his *Essai général de tactique* (1772). In 1791, the artillery was composed of seven regiments, each of two battalions of ten companies; and in that year the regiments altered their titles from the names of the places where they were raised to numbers, and the soldiers became *canonniers* or gunners. On 1 January 1791 the regiments received numbers: 1st La Fère, 2nd Metz, 3rd Besançon, 4th Grenoble, 5th Strasbourg, 6th Auxonne, and 7th Toul. The twenty companies of each regiment were organised into five brigades each of four companies. The Artillery of 1791 also had its complement of six companies of sappers and ten of artificers with a peacetime effective of 8,663 men. It is interesting to note that by 1814 the Artillery of Napoleon's *Grande Armée* had risen to over 103,000 men.

Napoleon, himself an artilleryman, did not bring anything new to the equipment of French artillery, nor did he add to its scientific knowledge by invention as did Congreve in Britain; but he did bring a new use of artillery which up until at least 1808 gave him a marked superiority over his enemies. In any battle, it is not possible to

'Napoleon at the battery'. From Horace Vernet's drawing of Napoleon aiding in the loading of a field gun during the siege of Toulon, 1793

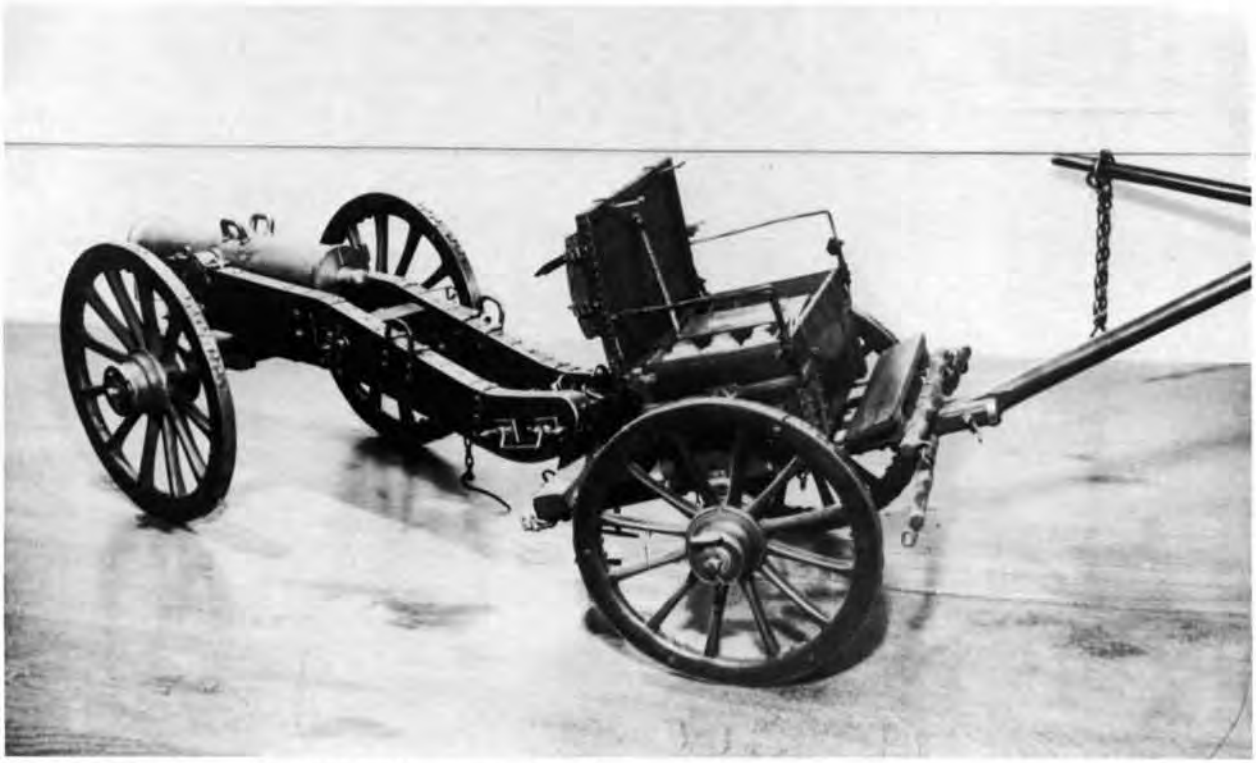
A field gun with detachment in action during the battle of Rivoli in the Italian campaign, 1797. From a drawing by Horace Vernet

divorce the artillery from the total conflict and it was precisely this planned complementary use that won Napoleon his early victories. The European Powers against whom he was engaged still clung to the time-honoured drill and fighting tactics of Frederick the Great; whereas the French, by their audacity and disregard of the old ways, soundly defeated the Prussians and Austrians in 1792 and the coalition of Austria, Prussia, Spain, Sardinia, Holland and Great Britain the following year.

On 7 February 1792 a horse artillery branch of the Artillery was formed and designated the *Artillierie légère*, which, like the British and Prussian equivalent, had its men mounted rather than on foot. The prime rôle of this light artillery was to support cavalry and infantry while manœuvring, especially at this early stage of the Revolutionary Wars against the Austrian cavalry who were far superior to the equivalent arm of the French forces. The light artillery or horse artillery consisted of nine regiments of six batteries, each composed of four officers and seventy-two men, with six to eight guns, usually 4 or 8 pdrs, and two howitzers. Each piece was entirely in the hands of civilian contractors, who furnished the horses and drivers; and companies such as Baudouin and Lanchere – large haulage contractors – usually performed this task for the Artillery. This system of contracted drivers and horses had been in use in most European countries since the Middle Ages and had been condemned time and time again by artillery officers, as it lacked efficiency and there were often cases of drivers retiring with their horses when things became difficult during a battle, leaving the guns stranded. The contract-drivers were a poor lot – '*Continuellement sans pain, sans solde, sans habits; et leurs chevaux sans fourrage, sans fer, et sans harnais*' (continually without bread, without pay, without clothing; and their horses without forage, without horseshoes and without harness). Louis XV had attempted to organise contract-drivers and had decreed that they were to wear blue smocks and bonnets of red and blue, but the organisation and quality of the drivers and their horses was poor. In 1799, much to the disgust of some officers, First Consul Bonaparte directed General Lespinasse to report on the proposed formation of a corps of drivers to be enlisted. The critics of this scheme considered that by enlisting drivers one degraded by association the name of soldiers; but Bonaparte went ahead and on 3 January 1800 an artillery train was formed who did duty as drivers, bringing guns and wagons to the place of action and retiring until needed. This system was also adopted in Britain and was soon found to be a great improvement over the artillery's old way of taking the field.

If improvements had been made in the organisation and to a certain extent in the equipment, they had also been made in scientific

'The battle of the Pyramids' by L. F. Lejeune, showing the massed infantry squares and the artillery pieces in action. 1798 (Musee de Versailles)



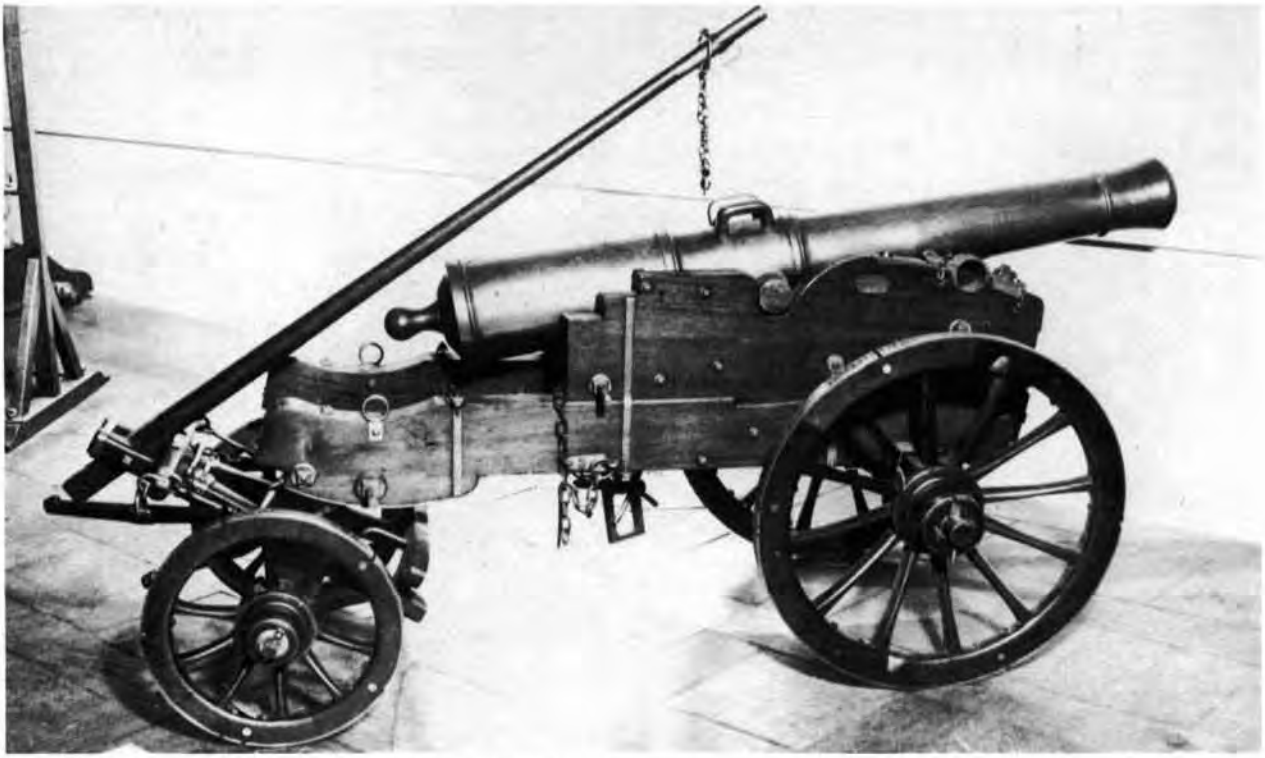
Field gun with ammunition limber shown open. Note the handles each side for the gunners to hold on to when riding on the limber. This can be seen on page 20. (Musee de l'Armee)

instruction. The new schools at Chalons, Metz and the *École polytechnique* in Paris not only admitted officers, as had been the practice of the Royalist schools of artillery, but also non-commissioned officers and men, to learn mathematics and to receive general instruction in the science of gunnery. This education resulted in the French non-commissioned officer having a greater degree of theoretical knowledge than his British counterpart, who relied more on the directions and orders of his officer.

The main difference in artillery recruiting was that all levied volunteers entered the regiment as individual recruits and not as complete units as was the custom in the rest of the French army. In the artillery of the Republic, the Consulate, and later of the Empire, great emphasis was placed on technical training of all ranks, and a high standard was mandatory for officers commanding artillery.

As in other armies, French infantry battalions had their complement of light field pieces, usually four to a battalion; but in 1795 Napoleon's emphasis on massed artillery reduced these guns to two per battalion and in 1803 they were done away with completely. Napoleon, however, stated that '*Tous les jours, je me convaincres du grand mal qu'on à fait a nos armées en ôtant les pieces de regiment.*' (Every day, I convince myself of the great harm done to our armies by the suppression of regimental guns.) The Emperor was later to declare that '*Les canon commes toutes les autres armes doit être réunir en masse, si l'on veut obtenir un résultat important.*' (Artillery, like other weapons, ought to be united in mass if one wishes to obtain an important result.) In 1809, however, in direct opposition to this principle, Napoleon ordered battalion guns to be restored to reinforce and bolster his new, untried and raw infantry battalions. In 1812 regimental guns were finally abolished.

In 1795 the number of horse artillery regiments was reduced to eight and the establishment fixed at 20,000 men. At the end of the year the artillery possessed 4,816 bronze siege pieces, 2,851 iron pieces of position and 2,543 field pieces; but, sadly, the artillery lacked some 30,000 horses, which greatly hindered and impeded the use of the major part of the field pieces.



Heavy siege piece and limber, showing the barrel positioned in the 'travelling' trunnion hole. (Musee de l'Armee)

At the end of 1799 Napoleon was created *Premier Consul* (First Consul), and continued to pressure his generals and arsenals for increased production of arms and perfection and advancement in the artillery. '*Du canon! du canon! il faut du canon!*' (Cannon! cannon! we must have cannon!) He ordered one general to '*Occupez-vous avec le plus grande activité de l'artillerie, c'est ce qui rétarde toujours et ce dont on n'a jamais assez.*' (Concern yourself with the utmost activity on the artillery, as it is this which is always behind and of which we never have enough.) For some years the artillery of the Gribeauval system had come under harsh criticism, and Napoleon set up the *Commission extraordinaire du materiel d'artillerie* under the presidency of Major-General Auguste Frederic Louis Marmont, himself an expert and a graduate of the artillery school at Metz, to advise on what improvements could be made to the system. By the time Napoleon created himself Emperor in 1804 and formed his *Grande Armée*, which extended the French hold over Europe, a number of improvements and modifications had been made to the equipment.

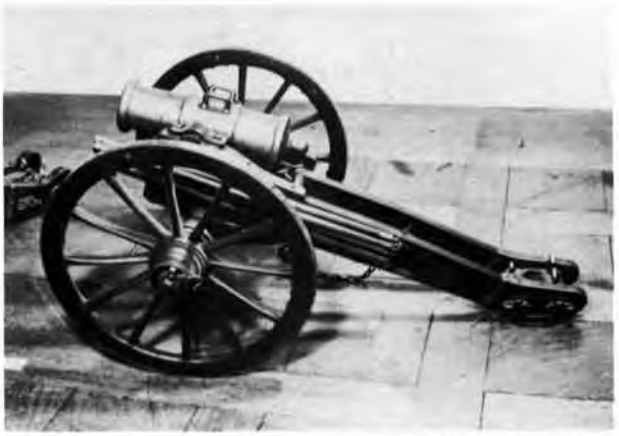
Artillery Equipment

The system of artillery established by Jean-Baptiste Vaquette de Gribeauval (1715–89) and the First Inspector-General of Artillery (*Premier Inspecteur Général d'Artillerie*) relied on simplicity and sturdiness of construction, a limited number of calibres of a fixed barrel length, and interchangeability as far as possible. Gribeauval had not only theoretical but also practical knowledge of artillery, having returned in 1763 from Germany, where he had commanded the Austrian artillery in the field and had studied the organisation of the Prussian artillery. It was not until the death of Valiere, whose system had been in use for many years, that Gribeauval was able to show the advantages of the equipment he had designed, and its lightness when compared with the cumbersome guns of Valiere. The basic system of fixed calibres of fixed lengths had been established by Louis XV in 1732 and both Valiere and Gribeauval followed these standards.

The field artillery equipment consisted of 4, 8 and 12 pdr guns with 6 and 8 pdr howitzers, while the siege and position artillery consisted of 12, 16 and 24 pdr guns and 24 pdr howitzers. The carriages for field artillery pieces and ordnance used by the horse artillery were of a similar construction. The carriages were made of two suitably shaped pieces of wood or 'cheeks' parallel to each other and joined with horizontal sections of wood. At the front, the lower part of the 'cheeks' was bolted to the axle tree to which the wheels were fitted, and the rear portion of the carriage was specially shaped to sit firmly on the ground. Various parts of the carriage which were liable to hard wear were reinforced with iron strapwork held by square-headed bolts, and the barrel was fitted to the carriage by means of its trunnions (horizontal round projections at the point of balance) resting in iron-reinforced trunnion holes. The barrel was kept firmly in place by closing over the trunnions a thicker shaped metal strap known as a 'capsquare', held by a hinge one end and a loop and pin the other. In the heavier calibre pieces there were two sets of trunnion holes, one set behind the other, the first being for the firing position, the second being for travelling when the carriage was limbered up.

The limber consisted of an axle tree and wheels, with a pintle in the centre of the cross bar which fitted through a metal-reinforced eye in the trail of the carriage. The carriage was also fitted with various bars and loops for manhandling and for stowage of drag ropes, rammers, buckets and other equipment. Ammunition was carried for ready use in a metal-reinforced box with two carrying bars, one each end, which rested behind the barrel between the 'cheeks'. The rest of the ammunition was usually carried in caissons which accompanied each gun – two for the 4 pdrs, three for the 8 pdrs and five for the 12 pdrs – although on occasions an ammunition limber was used for horse artillery pieces. Besides the ammunition wagons there was a large 'train' of wagons and carts for spare parts, spare barrels and wheels, artificer's tools and farrier's equipment, as well as mobile forges.

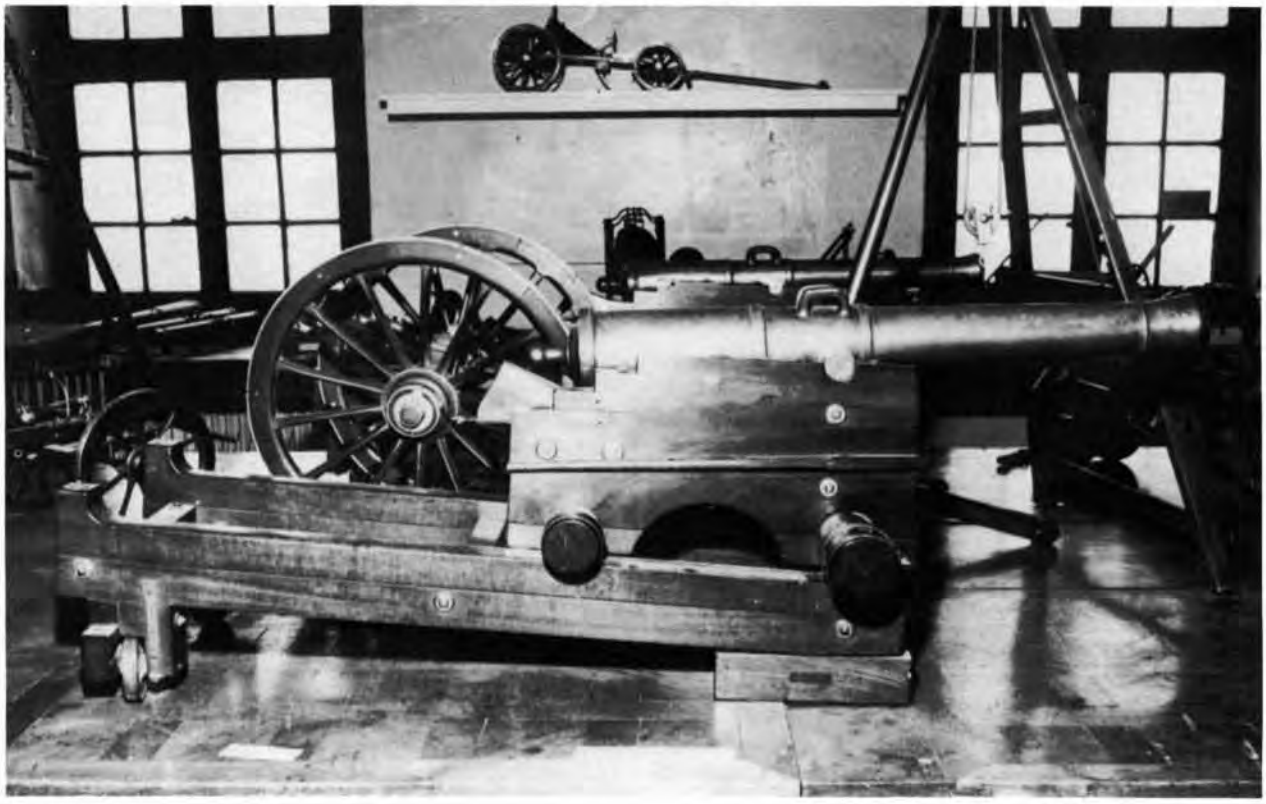
Howitzer carriages, although maintaining the same overall construction and appearance, differed from gun carriages in having a slightly shorter trail. Position guns and artillery for coastal defence and fixed fortifications were also of an interchangeable nature and were of various styles, garrison standing carriages being mounted on slide and traversing beds. The Gribeauval system also had various calibres of mortars which were mounted on wood or cast-iron 'beds', as their rôle was not one of mobility and they were transported when necessary on wagons.



Gribeauval system howitzer on carriage. Note the various sidearms strapped to the left cheek of the carriage. (Musee de l'Armee)

Ammunition, spare wheel wagon and limber. Spare wheel wagons were an essential part of any artillery reserve as either the rough terrain or the damage in action rendered this the most valuable component of the gun carriage. (Musee de l'Armee)

It is necessary to the understanding of the use of artillery during the Napoleonic Wars to know exactly how the pieces were loaded, primed and fired, as it was these somewhat cumbersome operations which dictated the limits of the use of artillery in the field. As soon as the piece arrived at its appointed position, the gun was unlimbered and the team driven a short distance to the rear.

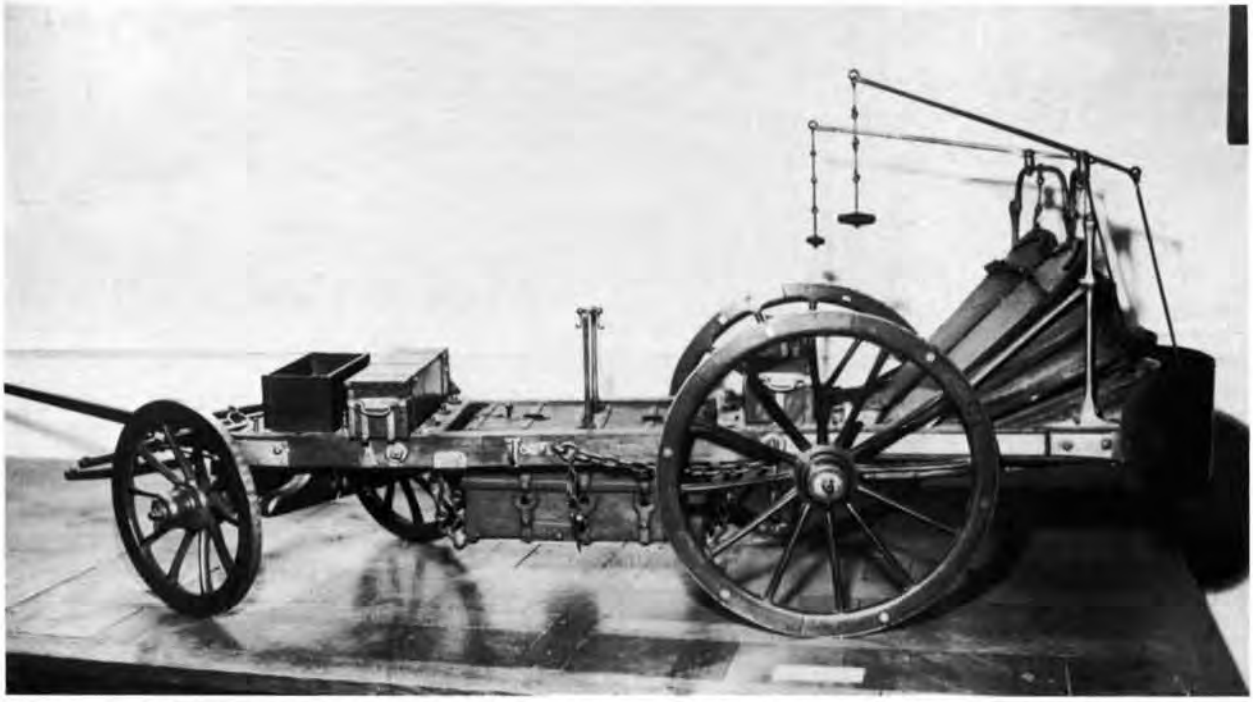


The ammunition locker was removed from the trail and opened. The 'number 1' – normally a First Class Gunner or Corporal – gave the order '*Chargez!*', the only order given with respect to loading, so well did the gunners know their drill. This emphasis on gun drill was insisted upon by officers of the Artillery, and to ensure rapidity and exactness gunners and recruits were drilled on the parade ground to perform the movements in complete silence and in perfect time. This automation helped the French artillery attain an extremely high standard of gun drill under fire, and contributed to the superiority of the French artillery during Napoleon's European campaigns.

It is easier to understand the gun drill if one imagines that the first shot has already been fired, as guns usually came into action loaded. In position, there would be two gunners forward of the axle tree, one each side and two behind the axle tree. Again one each side, with 'Number 1' behind the trail to direct movement (the *pointeur*), and a gunner to the left of the breech who 'served the vent'.

As soon as the shot was fired, the spongeman dipped the *écouvillon* (a rammer with sponge on one end and rammer on the other) into the water bucket and swabbed out the bore to remove any burning particles from the previous round. The *chargeur*, his opposite number in front of the axle tree, placed the powder charge or fixed round into the bore and stood back. The *porte écouvillon* (spongeman) reversed the rammer and pushed the charge home while the gunner 'serving the vent' placed his thumb, suitably protected by a thumbstall, over the vent as a final precaution against possible sudden compression in the bore which resulted if the ramming re-kindled any particle that had remained after the swabbing.

If fixed ammunition was not used, the projectile would be loaded next and rammed home to seat on the charge; but in battle the powder and charge were often put in one after another and rammed home with one movement, thus speeding up the rate of fire considerably. The gunner 'serving the vent' would make any adjustments to the elevation required, after which correction of line of fire would be done by manhandling the wheels and moving the trail with handspikes. The gunner behind the wheel on the left would pierce the powder bag by passing a pricker down



Left: Garrison standing carriage on a slide and traversing carriage as used in coastal forts and garrisons. This carriage can be seen in use in the background on page 17. (Musee de l'Armee)

Above: Four-wheeled field forge, and indispensible piece of equipment for artillery on campaign away from central depots. (Musee de l'Armee)

the vent and would then 'prime' the vent with either a tube of priming powder or loose powder. On the command 'Fire!' the opposite number would plunge a burning port-fire on to the vent, igniting the priming agent which in turn lit the main charge. Before the order to fire was given, gunners behind the axle tree stood well back to avoid injury from the recoil of the piece. The gun or howitzer would then have to be manhandled back into its previous position to be re-loaded.

The French pieces were more cumbersome than those of the British, especially the 9 pdr guns of the Royal Horse Artillery which employed the Congreve 'block' or solid trail as opposed to the double bracket carriage. As the battle wore on and casualties reduced the detachment or fatigue became acute, gunners would frequently neglect to haul the guns back into position. At Waterloo one British gunner officer summed up this situation familiar to all gunners when he wrote '. . . the depth of the ground and the exhausted state of the few men remaining at the guns had latterly prevented the possibility of running them up after each round, so that when the action ceased their recoils had brought them together in a confused heap.' The fatigue of the gunners can be understood easily when one considers that the 12 pdr Gribeauval field gun weighed $1\frac{1}{2}$ tons.

In battle, care was taken not to have too many rounds of powder charges near the guns in case of a hit by an enemy shell, and soldiers were detailed to bring up powder charges and shot from caissons stationed some way behind the battery they served. The ammunition used for field artillery was round shot and shell, but when in close contact with the enemy case and grape shot were much more damaging, particularly against massed troop formations.

Round shot was a solid cast-iron ball of a predetermined size to fit a piece of a fixed calibre; the shell was similarly a cast shot, but hollow and filled with a bursting charge and fuse to fragment the case a certain time after firing. Shot was always cast slightly smaller than the bore of the piece it was intended for and this difference was known as the 'windage'. It allowed the round to be more easily loaded and had no noticeable effect on velocity. Each of the above projectiles was usually fitted with a wooden base or 'sabot' which was held by iron strapping; this prevented the ball

Above: Grape shot in its painted canvas bag with charge. This form of ammunition was in common use in the armies of Europe and about the only effective answer against massed bodies of troops. (Kungl. Armemuseum)

Left: Shell fitted to a wood 'sabot' with iron straps. Note the threaded fuze hole. (Kungl. Armemuseum)

from turning over in the bore when fired and allowed a charge to be fitted to it to make 'fixed ammunition'. The serge bag containing the powder charge was opened at one end and the sabot seated in and then tied firmly with cord. Any projectile fitted with a 'sabot' could be used for fixed ammunition.

Case shot consisted of a container filled with musket balls and scraps of iron. At Waterloo the French are said to have used case shot filled with horseshoe nails. It was most effective against charging men and horses. Grape shot was also used but in this projectile the musket balls were symmetrically arranged around a core in a canvas bag which was then tied with cord and tarred. Its appearance, similar to a bunch of grapes, gave it its name.

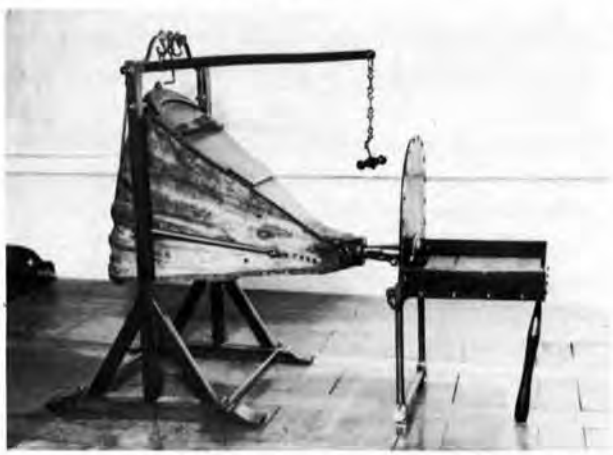
Round shot, although not explosive, was deadly in its effect – especially on dry ground where it could hit and bound forward to do more damage. A British surgeon noted that the French round shot '. . . appears to bound like a cricket ball; and we are only likely to establish its force by the manner in which it ploughs up the ground. A poor Irish lad of the Twenty-seventh Regiment was silly enough to call out to his comrades "Stop it, boys!"; and to endeavour to stop it with his foot, which was smashed to pieces so as to render amputation necessary.'

An officer of the 40th. Regiment remembered at Waterloo seeing a round shot from the French batteries which '. . . took off the head of Captain Fisher near me, and striking his company on the left flank put *hors de combat* more than twenty-five men. This was the most destructive shot I ever witnessed during a long period of service.'

French shells also wrought havoc when they actually exploded – not an invariable event, as French fuses were so bad. Captain Mercer, Royal Horse Artillery, noted that they spluttered on the ground where they landed before exploding but did no serious harm, although 'harassing and inconvenient'. Soldiers sometimes kicked the fuses out of the shells to render them harmless, while others picked them up and tossed them aside. Case shot and grape were hardly effective beyond 300 yards and rarely used over 200. One projectile the French did not possess was the spherical case shot, later named Shrapnel after

its inventor. This hollow shot filled with musket balls and a suitably fused bursting charge gave the British artillery a decided advantage. Fortescue, the famous historian, noted that '. . . A single Shrapnel shell had been known to kill every horse in a gun team even at long range. The French hated it because they could not reply to it. . . . Shrapnel, in fact, had a great deal more to do with beating the French than he received credit for. . . .'

Besides the destructive qualities of the projectiles there was also its psychological effect on men under fire. With the velocity at that time, it was possible to see the projectiles in flight; and closeness of combat also made it possible to see the French artillery loading and firing. Ensign Leeke of the 52nd Regiment, when aged only seventeen, saw the French gunners at Waterloo sponging out the barrel prior to reloading and saw it pointed at his square. '. . . When it was discharged I caught sight of the ball which appeared to be in a direct line for me. I thought, shall I move? No. I gathered myself up and stood firm . . . I do not know the rapidity with which cannonballs fly, but I think that two seconds elapsed from the time I saw this shot leaving the gun until it struck the front face of the square. . . .' This shot hit four men. While shells could kill and maim when they exploded, round shot bounded and smashed its way through the ranks by its sheer velocity, cutting men in half and decapitating others. Physically and psychologically it was a 'man stopper'.

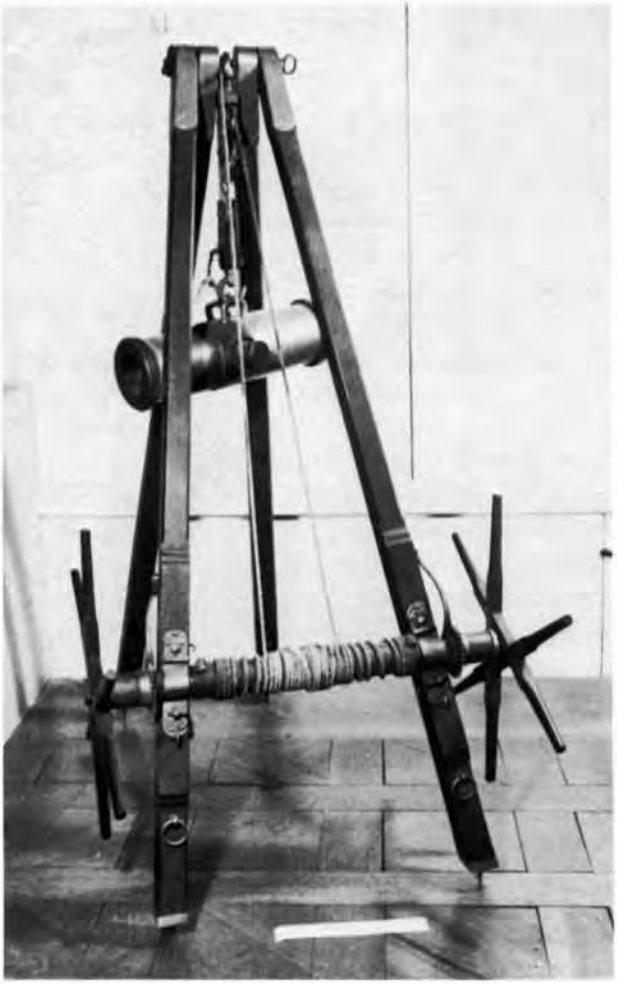


Small portable field forge usually carried on a cart or dismantled and stored in the spare wheel wagon. (Musee de l Armee)

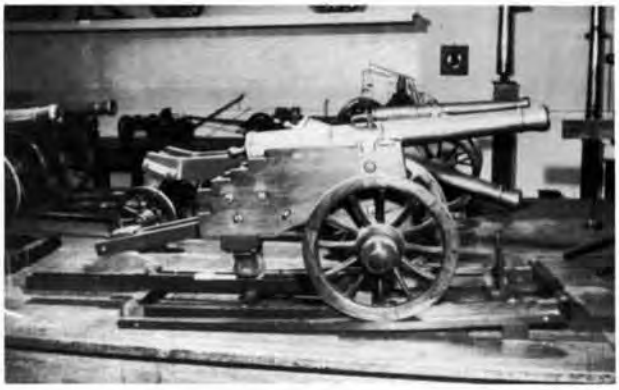
SYSTEM AN.XI

The committee assembled on the command of the First Consul, Napoleon, deliberated on the problems and drawbacks of the Gribeauval system, which had also been adopted by the Spanish and Bavarian artilleries. Members advocated the lightening of the field pieces and a general revision of the calibres in use, the reduction in number of the various sized wheels and the creation of a mountain artillery, amongst other things. The committee continued, however, to study the various problems seriously when the First Consul pressed for some material result. In 1803, as a consequence of this pressure, the committee recommended the manufacture of a 6 pdr field gun *courte de campagne*, designated *System An.XI* (Year eleven of the Republican Calendar – September 23 1803/04). The calibre was chosen to combat the problem of the lightness of the 4 pdr and the heaviness of the 8 pdr and also as a convenient means of using the large supplies of carriages, shot, shell and pieces captured from the enemies of France, who nearly all adhered to the system used by the British (i.e. 3, 6, 9 and 12 pdr field pieces). The French 6 pdr, which was rushed into production without trials and which utilised the carriages and equipment of the Gribeauval system to maintain interchangeability, was soon receiving adverse comments from the artillery, and reports of its poor performance and the quality of manufacture soon reached the committee. Eventually the short 6 pdr was abandoned. The *System An.XI* did, however, reduce the number of sizes of wheels for field artillery to three, and regulated the types of pieces for the various artillery formations. Mountain artillery were to have 3 and 6 pdrs (short) and a light 24 pdr howitzer capable of being carried on sleds or packed on mules; siege and fortress artillery were to have 12 and 24 pdr guns and a 24 pdr field howitzer, while the Coastal artillery were to have 24 and 36 pdrs and mortars.

The wood carriages of the Gribeauval system were painted a shade of 'dirty green' by mixing 2,500 grammes of yellow ochre with 30 grammes of black paint, although the Bavarians who joined Napoleon in 1809 preferred to paint their carriages a shade of light blue. Brass barrels were



Gyn for lifting off or placing on barrels on their carriages. (Musee de l'Armee)



Top: Garrison gun on a two-wheel and rear truck carriage mounted on a recoil platform. (Musee de l'Armee)

Above: Ammunition wagon (Musee de l'Armee)

usually kept dull on campaign, and metal and iron fittings on the carriages were painted black. The usual complement of horses was six in pairs in pole draught (although some carriages employed shafts when a single horse or one in front of another were used). In the French Artillery the two rear horses were harnessed to the single central pole with the other four horses joined to the central pole by harness and traces to the bars on the front end of the pole.

To keep pace with the constant demand for more weapons and pieces of artillery, factories were set up all over France. In Paris alone there were 258 ironworks, and cannon workshops were established in barges on the River Seine. A large gunpowder factory was constructed in the Grenelle plain to supply the needs of the army and a national search was undertaken for sources of saltpetre, the main ingredient for gunpowder. Bronze for casting cannon was obtained by any means. Church bells were requisitioned and a large traffic was set up via Switzerland, exchanging oxen for bronze. The oxen eventually ended up feeding the Austrian army! This rapid increase in armaments did not run smoothly; inexperienced casters, fraudulent factory owners and misappropriation of metal resulted in large numbers of faulty or defective pieces reaching the artillery. To remedy this an engineer officer, Prieur de la Côte-d'Or, was ordered to co-ordinate the nation's arms effort. By his strenuous efforts a fairly efficient system had been established by the time Napoleon created himself Emperor of the French in 1804.

Napoleon considered that an army could never have too many pieces of artillery and '*L'action massée de l'artillerie est seule capable d'améner la decision.*' (The massed action of artillery alone is capable of deciding the outcome.)

Organisation of the Imperial Artillery 1804-1815

In May 1804 the French senate voted Napoleon Emperor of the French, a title confirmed by a public plebiscite – and the seal was set on eleven years of turmoil in Europe. The Artillery was one of the most complex of organisations and at the beginning of the Empire consisted of the Artillery of the Guard, eight foot regiments, six horse regiments, eight battalions of artillery train, two battalions of *pontonniers* or bridge builders, fifteen companies of artificers, thirteen companies of veteran gunners, 130 coastal companies and seventeen Colonial companies (created in April 1804 to defend French colonies).

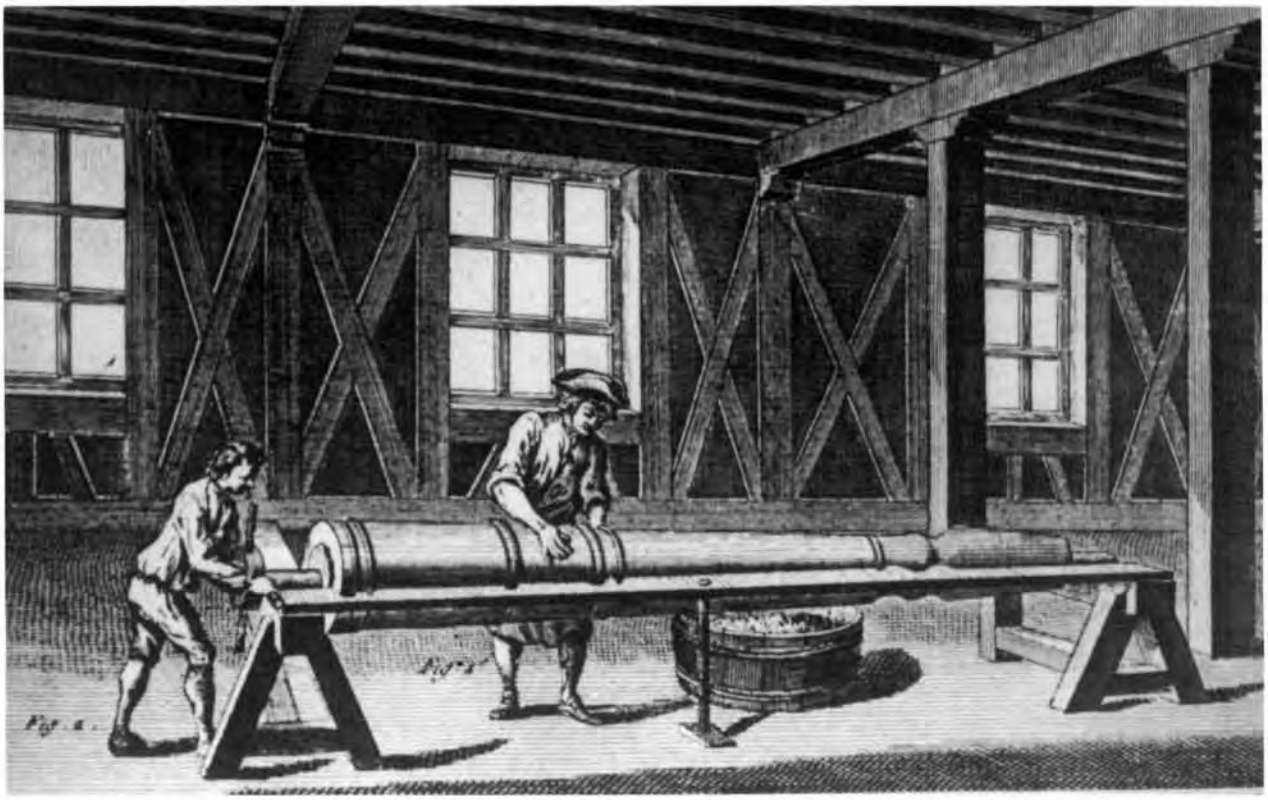
One of the crack units of the Imperial army, one of the most richly dressed and best horsed, was created in April 1806 from the light artillery of the Consular Guard formed in November 1799. This was the *Artillerie à cheval de la Garde*, which obtained the pick of men and materials. Its skill and manœuvrability was unsurpassed in the Artillery and the *pointeurs*, the 'Number 1s' of the guns, frequently had fifteen to twenty years service and were experts in their art. Every year a contest was held between the best of gunners, some of whom were able to fire three rounds a minute, no mean feat when one considers the complicated loading drill previously described. The horse artillery of the Guard consisted of three squadrons, each of two companies composed of ninety-seven officers, non-commissioned officers and men. In 1808 the Horse Artillery of the Guard was reduced to two squadrons, but was augmented in 1813 by the inclusion of a Young Guard company. In July 1814 it was disbanded, but on Napoleon's return from Elba was hastily reformed, four companies strong each with six guns.

The *Artillerie à pied de la Garde* was not formed until April 1808 and consisted of six companies of gunners and a company of *ouvriers-pontonniers* responsible for bridge building. The establishment of the artillery companies was fixed at four officers, ten non-commissioned officers, twenty first-class gunners, forty-eight gunners and two drummers. In 1809, a further three companies were added by the creation of the Young Guard companies. The *Artillerie à pied de la Garde* reached its peak in 1813, consisting of six Old Guard companies, sixteen Young Guard companies and a company of *ouvriers-pontonniers*. When Napoleon returned from Elba, the *Artillerie à pied de la Garde* only managed to muster six companies.

The Horse Artillery of the Line was six regiments strong in 1804 but increased to seven in 1810 by the addition of two companies of Dutch horse artillery incorporated into the French army. No sooner was this done than the 7th regiment was disbanded and the various companies absorbed by the 1st and 4th regiments. Usually each regiment consisted of six companies plus a depôt company. The Foot Artillery of the Line had eight regiments in 1804 and was increased to nine in 1810 when it absorbed the Dutch artillery. Originally each regiment consisted of twenty-two companies, but by 1813 the number increased to twenty-eight.

Besides the Horse and Foot Artillery of the Guard and Line, there were a number of other units which made up the functional artillery arm. Besides the Artillery Train, there were the various companies of veterans and garrison gunners and the *Canonniers garde côtes*, the coastal gunners who manned the various coastal installations and fortifications. By the time of the First Empire, this force had grown to 145 companies of 121 men and two officers, plus nineteen companies of veterans and thirty-three companies of garrison

Spare wheel wagon open showing ammunition stored inside. (Musee de l'Armee)



Making the model for casting ordnance. One of the numerous complicated and time consuming tasks necessary for the manufacture of ordnance. Here the workmen are shaping the model made from a mixture of sand and horse dung placed on a former and shaped with a template. From this model a mould was made to take the molten metal

gunners. The Artillery Train of the Line boasted ten battalions in 1804 rising to fourteen in 1810 with the inclusion of the Dutch artillery train. The *Train des équipages* of the Line and Guard, not to be confused with the Train, fielded twenty-two battalions in 1812 (including an ambulance battalion) and had sole charge over drivers, repair of material, care of the harness and equipment, supervision of the artillery park and supply wagons. In 1812, the *Battalion du Train des équipages de la Garde* was formed to supply the same service to the Artillery of the Guard. The three companies divided their work of supervising transport of the Guard, the first in charge of baggage, documents and forges, the second in charge of the ambulances and the third in charge of the commissary wagons. The entire unit comprised just over 800 officers and men.

In 1811 the Imperial Artillery consisted of nine foot regiments of twenty-two companies, six horse artillery regiments of seven companies (the 6th regiment had eight) twenty-seven Train battalions of six companies, seventeen companies of *pontonniers*, nineteen companies of artificers, and five companies of armourers representing a total effective of over 8,000 officers and men, not including the nineteen companies of veterans and 178 companies of coastal gunners which added up to a further 20,000 men. The artillery was distributed in the army as follows. Each infantry division had attached to it a foot artillery company equipped with six 6 pdrs and two howitzers, plus a company of horse artillery with four 6 pdrs and two howitzers whose rôle was to arrive at an arranged position and open fire, giving the foot gunners time to march up. The reserve for an army corps consisted of two foot divisions of six cannon of 12 pdr calibre and two howitzers, plus the artillery park. A horse artillery battery was attached to every light cavalry division and two batteries to a heavy cavalry division, while the Artillery of the Guard formed the entire reserve for the whole army. '*Au combat*' said Napoleon, '*l'artillerie de la Garde fournit partout.*' (In battle, the artillery of the Guard supplies everywhere.)

Unlike the Royal Artillery, Napoleon's Artillery

carried colours and were awarded battle honours for their contribution to the Imperial victories. The Horse Artillery of the Guard and Line had *guidons* whereas the regiments of Foot Artillery of the Guard and the Line had colours or standards. However, this distinguishing difference was abolished in 1813, and all carried a colour based on the national tricolour flag.

The horse artillery *guidons* prior to 1812 had a central design of a white lozenge with leaf motif edging, with a blue corner next to the staff at the top and a red outer top corner; blue outer bottom corner and red corner nearest the staff. Each of these corners carried the regimental number in a circle of laurels for the line regiments and a hunting horn in the laurels for the Guard. In the lozenge in gold was the usual inscription '*L'EMPEREUR DES FRANÇAIS AU* [number of regiment] *REGT D'ARTILLERIE A CHEVAL DE LA GARDE* [or *LA LIGNE*] *IMPERIAL*'. The reverse bore the normal '*VALEUR ET DISCIPLINE*' and the squadron number. The staff was surmounted by an Imperial eagle on a tablet with the squadron or regimental number. Guard regiments were distinguished by having an eagle above '*VALEUR ET DISCIPLINE*' on the reverse. The foot regiments followed the same design but on a colour.

In 1813, the tricolour was universally adopted and bore on the front the same inscription as above, and battle honours on the reverse. Honours found on artillery colours include the following for the Napoleonic and Revolutionary Wars: Austerlitz (1805), Danzig (1807), Friedland (1807), Genes (1800), Heliopolis (1800), Hohenlinden (1800), Jemmapes (1792), Jena (1806), Lutzen (1813), Marengo (1800), La Moskowa (1812), Saragosse (1809), Wagram (1809), Wissembourg (1793) and Zurich (1700). There were also other honours including Vienne, Essling and Madrid which were later dispensed with. The artillery standard of Napoleon's *Corps des Guides* (his personal bodyguard before the creation of the Imperial Guard) carried the following, roughly equivalent to the British mottos '*Ubique. Quo Fas et Gloria Ducunt*': '*REPQUE FRANÇSE. PARTOUT L'ARTILLERIE S'EST COMBLÉE DE GLOIRE.*' (French Republic. Everywhere the Artillery covers itself with glory.)

Soldier of the train of the Guard. From a drawing by Charlet. Note the harness and the large wood horse collar.

The uniforms of the artillery were always blue with distinctive scarlet cuffs, a combination that was also utilised by other countries such as Britain and Prussia. More often than not, especially during the Peninsular War and the disastrous Russian campaign of 1812, soldiers, and officers, were forced to wear what they could get. Because of the French system of living off the land, in Spain especially, where enormous numbers of men were constantly required to guard the lines of communication with France, supplies of new uniforms took months to arrive and the soldiers wore whatever they could pick up, whether civilian or military. The French were not alone in this. The British Army was also a motley sight, many men wearing pieces of French uniform, and undoubtedly there were numbers of French soldiers sporting items of British uniforms and equipment.

While French gunners wore blue uniforms, their Allies, as will be seen, retained their national colours. Blue was not only the colour for Napoleon's gunners, but most of his army wore it. '*La couleur bleue est la meilleure*' Napoleon stated, '. . . *C'est d'ailleurs celle sous lequelle nous sommes connus en Europe.*' (The colour blue is the best. . . . It is, after all, the colour by which we are known in Europe.) All the Artillery except the *Garde Cotes*

Gunner of the Imperial Guard talking to a *Sapeur de Genie* or engineer of the Imperial Guard

used scarlet facings; this latter ancient branch of the French artillery had their uniforms faced with sea green, apparently a temperamental colour which appears as differing shades in a number of contemporary prints. Their distinctions included crossed cannon and an anchor on their shako plate, buttons and pouch badge. In 1812 the *Garde Cotes* abandoned their sea green facings for scarlet, similar to the foot artillery.

Well organised artillery was appreciated by Napoleon who realised the great contribution it made to his victories. Glorious infantry and cavalry charges might carry the day in the end, but the solid dependable might of a massed bombardment was an indispensible factor to any battle. In exile on St Helena, Napoleon declared that '*L'Artillerie aujourd'hui fait la veritable destinée des armées et des peuples*'. (Artillery today governs the true destiny of armies and nations.)

Gunner of the *Garde Cotes* and a customs officer. From a drawing by Martinet. Note the other gunners in the background and the coastal gun mounted on the carriage as shown on page 8.

Napoleon's Allies

As the French extended their firm hold over Europe, they acquired by force or otherwise allies and satellite states who were by agreement or by conquest obliged to supply men for Napoleon's *Grande Armée*. Not all were able to supply artillery units, many smaller states contenting themselves with offering infantry and perhaps cavalry.

SWITZERLAND Under a treaty of alliance signed at Fribourg on 27 September 1803, the Swiss supplied the French army with 16,000 troops consisting of four regiments, and four companies of artillery who were dressed in a similar fashion to the French, blue with red facings and piping. With Switzerland's contribution, the Neuchatel battalion of Marshal Berthier and the Valais battalions must be included. The Valais battalion need not concern us, as while they agreed to supply infantry, they possessed no artillery. Neuchatel was under the King of Prussia until it was ceded to France in 1806 and declared a principality under Marshal Berthier. On 11 May 1807 the battalion was formed which included one company of artillery. While the rest of the battalion was dressed in yellow faced red (resulting in the nickname *Les canaris* (the canaries), the artillery wore blue with yellow collar and cuffs. The artillery also had its own complement of engineers and Artillery Train, the latter dressed in blue with yellow collar but grey cuffs. The drivers wore buckskin breeches and the gunners wore blue breeches with yellow side-stripes and black gaiters. The shako followed the French Artillery style. The battalion fought against the Austrians in 1809, and served in Spain until withdrawn for the 1812 Russian campaign. They fought for Napoleon until the end, the remnants being disbanded on 1 June 1814. The equipment was of the French Gribeauval pattern.

GRAND DUCHY OF WARSAW After the Treaty of Tilsit the Grand Duchy was created and the artillery brought up to three battalions consisting of three foot artillery companies with six guns each, a transport company and a company of sappers. In 1809 the foot artillery was organised into a single regiment. The gunners wore the typical French shako and had dark green coats and trousers with red epaulettes and piping. The horse artillery was not formed until 1808 and then at the personal expense of Count Potocki. At first it was only company strength but by 1810 it had grown to a regiment. Up to this date, dark green coat and overalls were worn with the Polish

lancer's *czapka* which sported a red plume. In 1810 the uniform was altered to that worn by the French *Chasseurs à cheval* with fur busby with red cords and bag.

BADEN In July 1808, Baden, as part of their agreement as a member of the Confederation of the Rhine, supplied a regiment of infantry and a battery of artillery for Spain. They also took part in the Russian campaign of 1812. The Baden contingent was disbanded in 1814 and returned home. The gunners wore a black crested leather helmet with brass fittings (*raupenhelm*), a blue coat faced black with red turnbacks, brass buttons and brass metal epaulettes, grey waistcoat and breeches with black gaiters.

WESTPHALIA The Kingdom of Westphalia, created by Napoleon for his brother Jerome in August 1807, entered the Confederation of the Rhine the following year and supplied a large number of troops of all arms to the Emperor. The artillery were clothed and equipped as the French artillery but incorporated the cypher JN rather than the Imperial N of the Emperor.

BAVARIA The Bavarians provided a large number of men of all arms who fought for the French in Europe and in Russia in 1812, where they were almost annihilated. The Bavarian artillery was dressed as their French counterpart except that they retained the crested leather *raupenhelm* with brass fittings, a national cockade of white and light blue and a red plume. The dark blue coats had red collars and cuffs and black lapels. In bad weather a light grey greatcoat was worn. The Train wore light grey with sky blue facings, light grey overalls with sky blue stripe on the outer seam. The horse artillery branch were dressed like light cavalry and also retained the crested helmet.

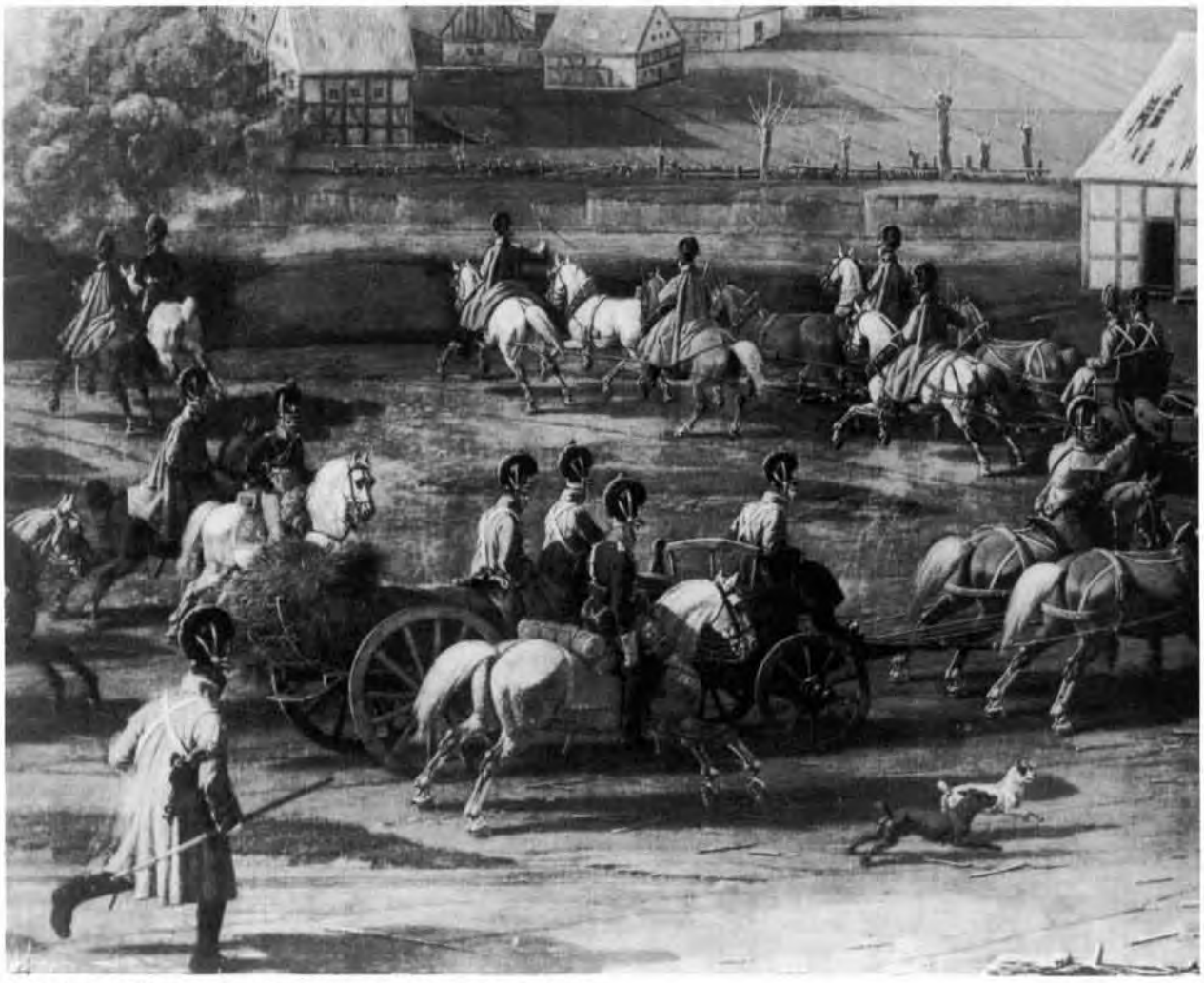
HOLLAND The Emperor created Louis Bonaparte King of Holland in 1806 and the Dutch uniforms were modelled on those of the French. In 1810, however, the various units of the Dutch army including the horse and foot artillery were incorporated into the French army and lost all traces of individuality.

WÜRTTEMBERG In 1806, when Württemberg joined the Confederation of the Rhine, her artillery had only 466 officers and men. By 1809, however, it could boast of three batteries with twenty-two guns. When the Württemberg artillery marched to invade Russia there were two horse artillery and two foot artillery batteries, all of which were lost during the disastrous retreat. In 1813 a battery of horse and foot artillery were re-raised, but after the battle of Leipzig Württemberg changed sides and joined the Allies against France. The gunners wore the distinctive *raupenhelm*, and although dressed in the French style had the jacket in a distinctive light blue with black collar and cuffs and black lapels; these were abandoned in 1810, and replaced with light blue half-lapels piped in yellow. Light blue breeches were worn with black gaiters. The Horse Artillery were similarly dressed but had brass shoulder scales in place of epaulettes or shoulder straps. In 1813, when re-raised, the *raupenhelm* was abandoned in favour of the French pattern shako with yellow cords. The Württemberg Guard Artillery wore light blue uniforms with black facings and the front edged in white and adorned with six bars of white tape.

KLEVE-BERG Marshal Murat, who had the Grand Duchy of Kleve-Berg bestowed on him in 1806, entered the Confederation of the Rhine the following year. Amongst the 5,000 troops aiding the Imperial cause were five companies of artillery which marched with the *Grande Armée* into Russia in 1812. The gunners wore the French style shako with red ball tuft and white cords. The *habit veste* in blue, closed to the waist, had red collar and cuffs and the front piped red in a plastron shape with brass buttons.

SAXONY Over 20,000 Saxons were with the Grande Armée that invaded Russia in 1812, amongst them units of infantry, cavalry and artillery. The Saxon artillery were dressed in green with red facings and piping, a traditional colour that had been introduced at the beginning of the eighteenth century and which remained in use until 1914.

Facing: French army preparing to cross the St Bernard Pass. Note the gunners in the foreground dismounting their equipment and artificers fitting barrels into hewn out tree trunks. A field forge can be seen at the end of the convoy of mules laden with wheels and ammunition chests. (Musee de Versailles)



Bavarian artillery at the siege of Breslau, 1806. Detail from the painting by W. von Kobel. Various details of dress are shown as well as the equipment. Note the gunners carrying a pistol in a holster on the right side, also the two officers mounted who are not wearing cloaks

The Kingdom of Naples also supplied large contingents of troops when Napoleon's brother-in-law Joachim Murat succeeded Joseph Bonaparte as King in 1806, the latter taking over the Spanish throne. Many of the smaller members of the Confederation of the Rhine such as Saxe-Coburg-Saalfeld, Oldenberg, Frankfurt, Waldeck, Nassau and Liepe-Detmold to name a few, were only obliged to supply foot soldiers.

The main problem facing the French was the supply of suitable shot and shell for the pieces as not all the Emperor's Allies utilised the Gribeauval system. Some adopted the Prussian artillery while others preferred the Austrian pieces, both systems coinciding with that used by Britain. A serious effort was made to use only the French system in order to avoid the obvious headache of numerous calibres in one army for the Quarter Masters.

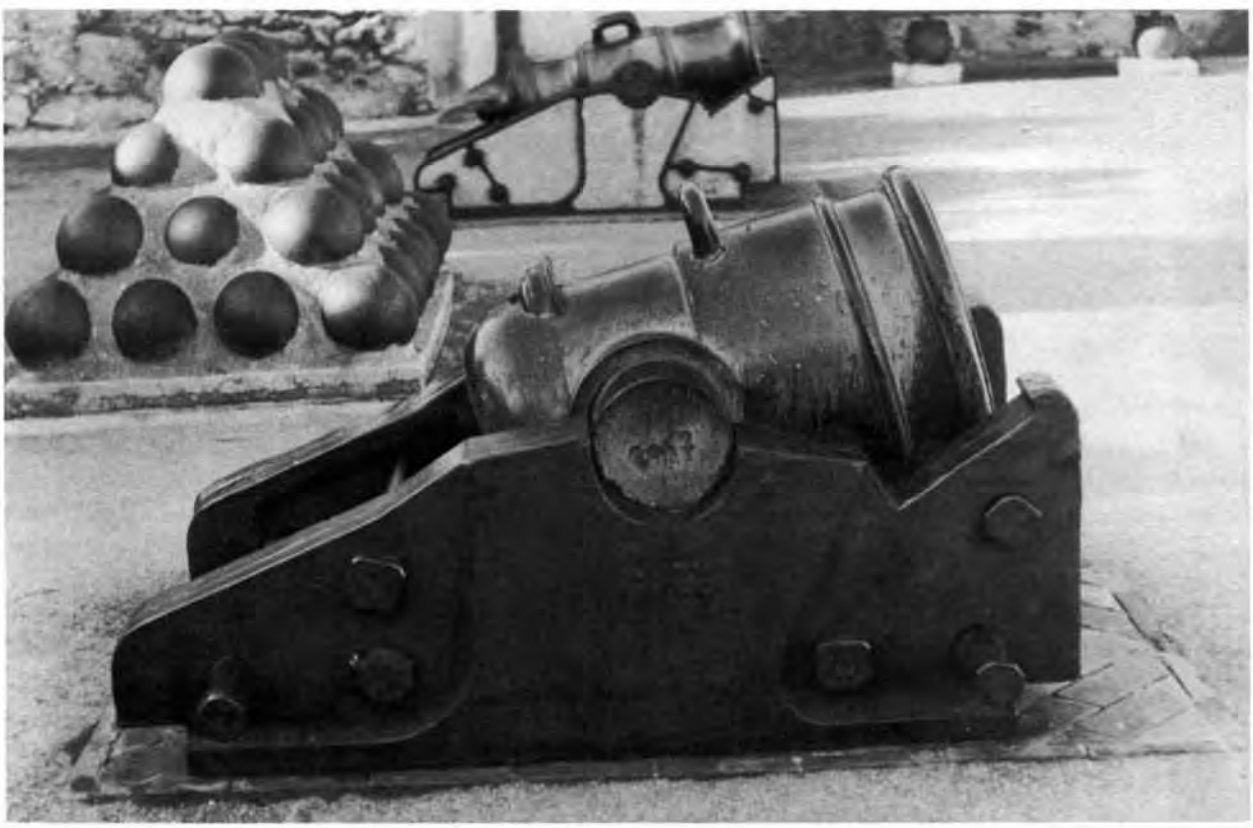
The contribution made by the allied states and satellites was considerable, especially in Spain but above all during the Russian campaign in 1812. Unfortunately for Napoleon the disastrous results of that campaign in terms of prestige, manpower and equipment caused a general cooling of relationships within the Empire, and a number of states began to think twice about their alliance with the French. The Bavarians changed sides in 1812, and infantry of other German states such as Frankfurt-am-Main and Nassau deserted to the British in 1813.

Artillery in the Revolutionary Wars 1792-1804

The Revolutionary Wars cover the period from the outbreak of hostilities between the French and the Prussians and Austrians to the time Napoleon, who had distinguished himself first at the capture of Toulon, was created Emperor.

Already the entire nation had been 'mobilized' for war by a law of 23 August 1793. 'The young men shall fight; the married men shall forge weapons and transport supplies; the women will make tents and clothes and will serve in hospitals; the children will make up old linen into lint; the old men will have themselves carried into the public squares and rouse the courage of the fighting men, to preach the unity of the Republic and hatred against kings. . . .' While the French dedication to total war gave them a marked advantage over the conscripted armies of Prussia and Austria, it was the use of new fighting methods which yielded the victories which firmly established the Revolution.

Napoleon with his army of Italy, to which were attached only 30 pieces of artillery and about 1,500 effective horses, showed how the combined use of artillery and infantry could gain the day. Speed was the essence of any of Napoleon's victories, together with a thorough knowledge of his enemies, the terrain and the order of battle. Little was left to chance. He used the artillery in the field as he would have done at a siege, by concentrating his firepower at the beginning of a battle on one given point. 'Once the breach is made' Napoleon said, 'the balance is upset, everything else becomes useless and the place can be taken. . . . One must not dissipate one's attacks.'



A large calibre mortar mounted on a cast iron bed dated 1809. Note the cut out at the front of the bed on which a bar could be placed to raise the barrel.

Napoleon clung to this theory, and during the years 1807–15, when the quality of his infantry began to decline, he put more emphasis on the massed use of artillery. However, during this period his enemies, who had at first been slow to grasp the new methods of warfare utilised by the French and to realise the advantages gained by the use of massed batteries, replied to Napoleon's use of artillery with a devastating fire of their own. While massed artillery as a prelude to a spirited infantry attack with cavalry support admirably suited the Emperor, this accumulation and concentration of guns which the French found indispensible was considered unsuitable by the Duke of Wellington. A defensive action, which was nearly always Wellington's strategy, called for artillery support on a wide front rather than a concentration which offered a single massed target for the enemy gunners.

By 1800, most countries had accepted the use of mobile or horse artillery, but their main artillery effective lay with the marching battalions and the batteries, whose slow and lumbering movements were an accepted part of war. Napoleon, however, was not content to be slowed down by any incumbrance, and his planning and decisive action in his early battles was due to his superior speed and positioning. Every arm had to be self-sufficient and to be able to move at a faster pace than the enemy. Manœuvrability was the essential ingredient on which Napoleon based his calculation, his planning and his success.

While the French artillery was not superior to any other, and often inferior in material and manpower, its application was far and away superior. French powder might well have been criticised as not being so pure as that of the British, and its range not so great, but the decided contribution of the artillery to the early victories of the French is undeniable.

The offensive spirit of the French army and the artillery was in direct contrast to the slow, ponderous and defensive tactics of the Austrians and Prussians, who were soundly beaten at Jemmapes on 6 November 1792, at Wattignies the following year, and at a number of other battles. The attacking spirit of the French sometimes got a little out of hand and at Wattignies a horse battery which advanced too far was captured after the gunners had spiked their guns. The first 'artillery charge' was made at the battle of Arlon, when a certain Captain Sorbier led his battery in a charge against a so-far unbreakable Austrian square. Cavalry often avoided attacking squares as it was unprofitable, but for horse artillery to charge a square was unthinkable. The French gunners broke the square and opened the way for the cavalry. (Captain Norman Ramsey of the Royal Horse Artillery had probably heard of Sorbier's exploit when he modified it slightly and charged through the French cavalry which surrounded his troop at Fuentes de Onero in May 1811, and so saved his guns.)

The Artillery were actively engaged on the Rhine during 1796–7, aiding the French in winning the bridgeheads, while in Italy, Napoleon with his ragged and badly equipped army was winning victory after victory, using massed artillery in preliminary bombardments to batter the enemy before launching the infantry attack. If at first, lack of pieces made the bombardment less effective than Napoleon would have liked, later campaigns of the Napoleonic Wars were marked by artillery duels of unprecedented strength. (At Borodino, according to one Russian historian, the battle started '. . . . with a terrible cannonade of twelve hundred guns, which was heard one hundred kilometres around.' At Waterloo in 1815, Napoleon's preliminary bombardment with 80 guns seems feeble by comparison.)

One of the most spectacular feats accomplished by Napoleon with artillery was his passage over the St Bernard, which completely surprised the Austrians who were threatening Genoa. Artillery was dismounted and every single piece of equipment including barrels, trails, and wheels was taken over the Alps. Trees were cut down and hewn out to encase the barrels and pulled as rudimentary sledges. Thevenin's painting in the Musée de Versailles shows the gunners, both foot and horse, fitting the barrels of cannon and howitzers into the hollowed logs, while the trails and carriages are manhandled on to horses and mules in preparation for the historic march. Fragonard's engraving shows the barrel of a field piece being hauled up the Alps under the watchful eye of the First Consul.

The Austrians, surprised by the arrival of

Passage over the St Bernard Pass showing the gunners using handspikes to assist in getting a barrel on a tree trunk over.

Napoleon's army and finding themselves surrounded, attacked the French on 14 June at Marengo. Unfortunately for the French not all their artillery had arrived, and at the end of the day the Austrian superiority in artillery forced the French to retire, Napoleon having only fifteen pieces against the Austrians' hundred or so. The Austrians were so confident of victory that their General Melas had already despatched a courier to Vienna (and, mysteriously, the news was also already *en route* for Paris), but for Napoleon the day was not yet over. He hastily summoned General Desaix, whose corps he had detached from the army the previous day, and in due course the fresh troops and artillery arrived to give the French a resounding victory. The fire of a massed battery of eighteen guns smashed into the Austrian columns and the infantry and cavalry pursued and harassed the dispirited Austrians, clinching the victory.

The Napoleonic Wars 1804-1815

France had virtually ground Europe to its knees, and by the Treaty of Amiens in 1802 all hostilities ceased and a new phase in the history of Europe dawned. An insignificant junior artillery officer, by sheer brains, willpower and know-how had risen to become *First Consul* and, in effect, dictator of France.

The uneasy peace, which endured but ten months, ended in Britain's blockade of the Continent and Napoleon's retaliatory moves and preparations for invasion. Establishing a camp at Boulogne, he ammassed troops and equipment ready for his cross-Channel assault. A large battery of imposing mortars, with a range of little over

'The battle of Marengo by L. F. Lejeune. The infantry advance as the gunners on the right of the picture continue to fire into the enemy. The team, gunners and officers are of the Consular Guard Artillery and wear, except for drivers, a light cavalry style of uniform. (Musee de Versailles)

1,500 yards, was assembled and pointed threateningly towards England. The Emperor's dream – for it could not be considered a serious reality in view of Britain's naval superiority – was abandoned when in August 1805 he took the initiative and marched eastward against the newly recruited members of the Third Coalition.

As the Emperor and his army, with 350 pieces of artillery, marched from Boulogne into Germany, the Austrian army under General Mack advanced into Bavaria. Napoleon's army comprised 186,000 men divided into seven army corps, each with their own infantry, cavalry and artillery. This gave Bonaparte the flexibility he needed to defeat the Austrians. While Mack was waiting for the French to appear through the Black Forest, Napoleon passed to the north with part of his army and cut the Austrians from Vienna, while the other army corps completed the encircling of the enemy. The French inflicted several defeats on the Austrians who clashed with them in an attempt to break out. Eventually, on 17 October, Mack capitulated; the campaign had lasted for fourteen days and had cost the Austrians 62,000 men, 80 stands of colours and 200 pieces of artillery.

The news of the defeat of the combined French and Spanish fleets at Trafalgar confronted Napoleon with the need for rapid military decisions. He had beaten the Austrians, but the Austrian armies were re-grouping and forming with those of Russia. Prussia, until now a neutral, was swaying uneasily on the brink about to join the Coalition. Napoleon hastily set his army in motion and entered Vienna without opposition on 13 November. Resting for two days, he pushed on to find the concentrated armies of Russia and Austria who were now near Olmutz, ninety miles

1 **Gunner, Foot Artillery, 1804**
2 **Gunner, Foot Artillery of the Line, 1807**
3 **Officer, Horse Artillery, 1804**

1

3

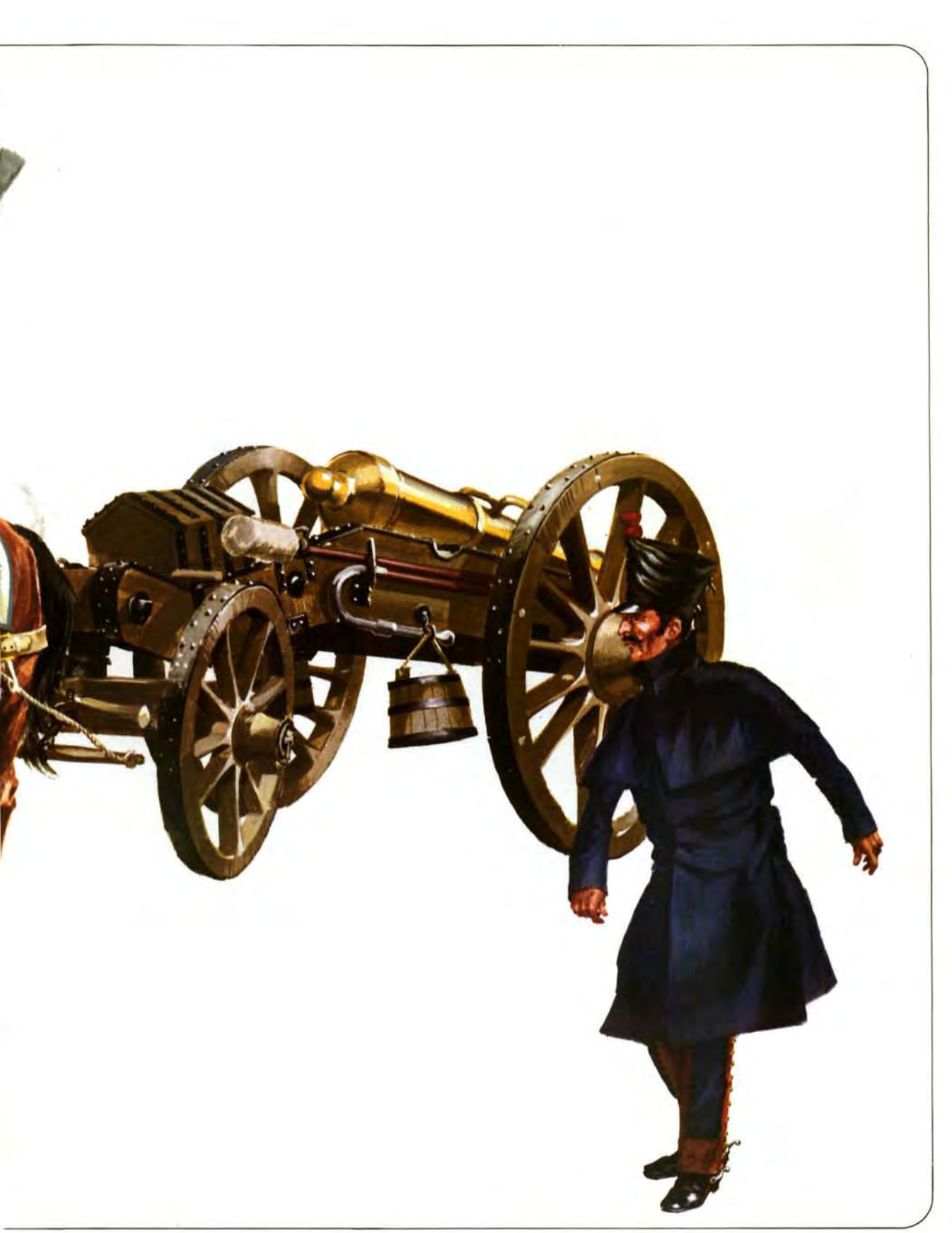
2

1 **Officer, Horse Artillery of the Guard, 1807**

2 **Sergeant-Major, Horse Artillery of the Guard, 1807**

1 **Pioneer, Foot Artillery of the Guard, 1809**
2 **Driver, Artillery Train of the Guard, 1809**
3 **Gunner, Foot Artillery of the Guard, 1808**

Gunner, drivers and four-horse team with 12 pdr gun and limber, Foot Artillery of the Line, 1810



1 **Musician, 9th Regiment, Foot Artillery of the Line, 1811**

2 **Drummer, Foot Artillery of the Line, 1812**

3 **Gunner, Horse Artillery of the Guard, 1811**

1

2

3

1 **Driver, Artillery Train of the Guard, 1812**
2 **Gunner, Horse Artillery of the Line, 1812**
3 **Driver, Artillery Train of the Line, 1813**

1 **Officer, Horse Artillery of the Line, 1813**
2 **Gunner, Foot Artillery of the Line, 1815**
3 **Gunner, Foot Artillery of the Guard, 1814**

1

2

3

French artillery in harsh conditions crossing the Sierra Guadarrama. From the painting by Taunay. (Musee de Versailles)

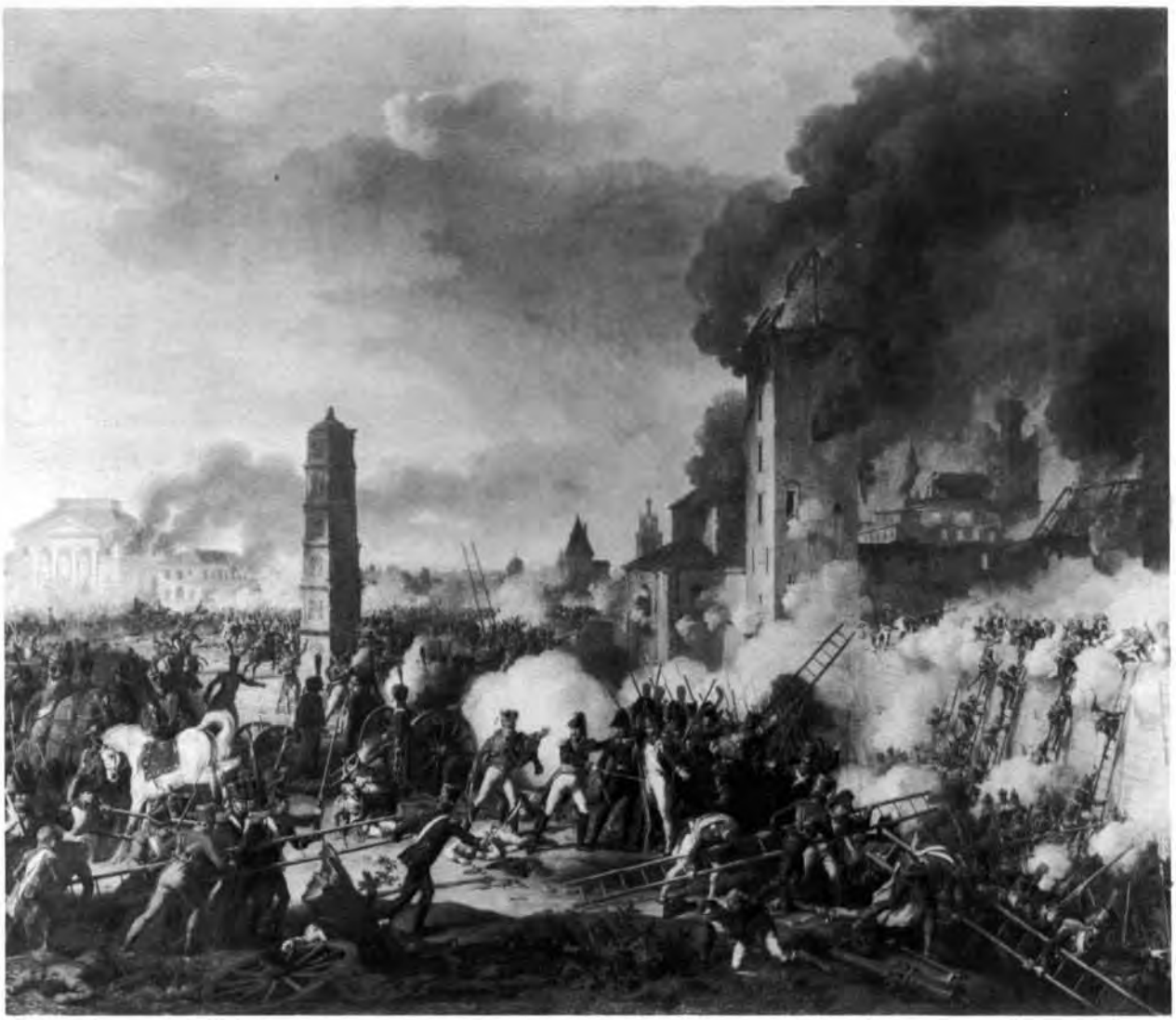
from Vienna. The combined enemy armies totalled some 95,000 men while that of the French – weakened by battle and also by having to leave troops behind to garrison and guard the lines of communication – had fallen to 80,000. The scene was set for Napoleon's finest victory, that of Austerlitz. What Marengo had done for him as First Consul, Austerlitz would do for him as Emperor.

Although the artillery played its usual important rôle in Napoleon's tactics at Austerlitz, it was his skilful strategy which half-won the battle before it had started. In his usual fashion, Napoleon chose the field of battle and positioned his troops in such a way that the enemy thought him prepared only for a defensive action. He purposely offered a weak right flank for the Coalition forces to attempt to turn, with a view to their cutting the French retreat from Vienna. As soon as the enemy drew strength from their centre to attack this 'decoy', the French would strike at that newly weakened centre. Immediately he saw the enemy in motion, the Emperor realised that they had fallen for his ruse. 'Before tomorrow evening' he exclaimed, 'that army will be mine!'.

The battle was a long-drawn and bloody conflict between three great armies. Nothing the Russians and Austrians attempted could alter their initial mistake of falling into the French trap. Once it was sprung, the battle was lost. In

the centre and on their left the French were masters of the field, the retreating Austrian and Russian troops being harassed by the artillery of the Imperial Guard '. . . whose fire ploughed through their long columns, carrying with it death and consternation.' On the right, the only way of escape lay across the frozen Lake Menitz. '. . . In an instant the white expanse was blackened by the flying multitude. The most horrible disastrous phase of the whole battle was at hand. The shot of the French artillery which was firing on the retreat broke the ice at many points, and its frail support gave way. . . . Thousands of Russians, with horses, artillery and train sank into the lake and were engulfed. . . .'

Recriminations between the allies ensued after the battle. The Russians accused the Austrians of incapacity and even treason. In a report to the Emperor of Russia, one general wrote: 'They [the Austrian generals] conducted your majesty's army rather in a way to deliver it to the enemy than to fight. . . .' Some considered that Napoleon knew the disposition of the Allied forces, which he undoubtedly did, but the Russians could not admit to being duped. 'The plan had been treacherously communicated to Bonaparte; forty-



'The attack and capture of Ratisbone' 1809. While the troops are moving forward with scaling ladders, the artillery, in the middle, still continue to pound the walls. The officer watching the gunners is wearing the pelisse. From the painting by Thevenin (Musee de Versailles)

eight hours before we were ready, the latter began the attack at break of day. . . .'

On 4 December an armistice was agreed and on Christmas Eve 1805 the Peace of Presburg was signed. By his brilliant strategy at Austerlitz, Napoleon seemed to have made himself master of Central Europe. The following year, in attempting to make peace with Russia, the French were at war with Prussia. The Prussians, like the Austrians the year before, did not allow time for the Russians to join them, resulting in the twin defeats at Jena and Auerstädt. Once again the French victory was due to the superior tactics of the Emperor and his skilled balancing of the three combat arms.

While Napoleon realised the value of artillery, he also appreciated its value to his enemies, even though they used it with less skill than he. At Landsberg in October 1805 the 26th Cuirassiers charged and surprised Prince Ferdinand's Austrian artillery, so crippling it as to prevent its taking any major part in the battle. Napoleon's careful application of his artillery was not confined to the attack. The night before the battle of Jena in 1806 Napoleon had his pioneers enlarge a small pathway to the Landgrafenberg plateau to enable his artillery to attain their positions and surprise the enemy. He personally stood holding a lantern throughout the night, as the gunners struggled and toiled, cursed and heaved their pieces into place. With the aid of twelve horse teams, the artillerymen attained their objective and were ready at daybreak to open a heavy bombardment.

At Eylau in February 1807, where Napoleon was at a disadvantage with artillery – he had barely 200 pieces against the Russian 400 – he successfully used it in a defensive rôle and won a close victory. Alfred Rambaud in his *History of Russia* (1882) described the morning of the battle and the setback experienced by Augereau's divisions. 'A thick snow was falling, which ever and anon hid the battle-field from sight; the sky was of a livid gray; the landscape was as gloomy as the result of the action. The battle began by a formidable cannonade, which lasted all day. The French, sheltered by the buildings of the town of Eylau, and disposed in thin lines, suffered from it less than the Russians, who had little cover, and were ranged in compact masses. The corps of Augereau and the division of Saint Hilaire, entrusted with the attack on the Russian left wing, went astray, blinded by a squall of snow; when the sky cleared, the two divisions of Augereau found themselves opposite the Russian centre,

French Horse Artillery manhandling a gun and limber over difficult terrain. The shortage of horses, on occasion made it necessary to reduce teams from six to four. (Parker Gallery)

forty paces from a battery of seventy-two guns; mown down at the cannon's mouth, they lost in a few minutes five thousand two hundred men.' Luckily the twenty-four pieces of the Horse Artillery of the Guard, with those of the cavalry and 7th Corps reserve, were able to stop the counterattack of the Russians. The Emperor himself urged on the gunners, and as at Toulon fourteen years before, took the rammer, loaded and trained the field pieces. 'The French' wrote Rambaud, 'had more right to call themselves victorious, as they remained masters of the field of battle. Unlike the Russians, some of their troops were still intact . . . and a gloomy sadness hung over the survivors.' Napoleon in his despatch mentioned the thousands of heaped-up corpses and the gunners killed beside the pieces, '. . . all thrown into relief by a background of snow.'

The Russians fell back towards their own frontiers pursued by the French, and although the Emperor's troops were checked at the beginning of June at Heilsberg, they were victorious at Friedland four days later.

To offset the poor manœuvring powers of their infantry the Russians utilised great numbers of cannon, but they never attained anything like the advantage Napoleon obtained from his artillery. At Eylau, as we have seen, he was completely outnumbered in cannon, but by a superior application managed to carry the day.

At Friedland, Senarmont's remarkable use of artillery finally opened the way for the infantry assault. Napoleon himself, seeing Senarmont's accomplishment, remarked to an ADC 'These artillerymen are an unruly lot who see things at times better than we; let them carry on.' The Russian army was forced back across the river, battered by grape shot and harassed by cavalry. 'Ney led this charge with irresistible fury', wrote Rambaud, 'the Russians were riddled by his artillery at one hundred and fifty paces . . . he burnt Friedland with his shells, and carronaded the bridges, which was their [the Russians] only way of retreat.' The Russians lost about 25,000 men and all their artillery and, unable to resist Napoleon, proposed an armistice which was signed at Tilsit on 22 June.

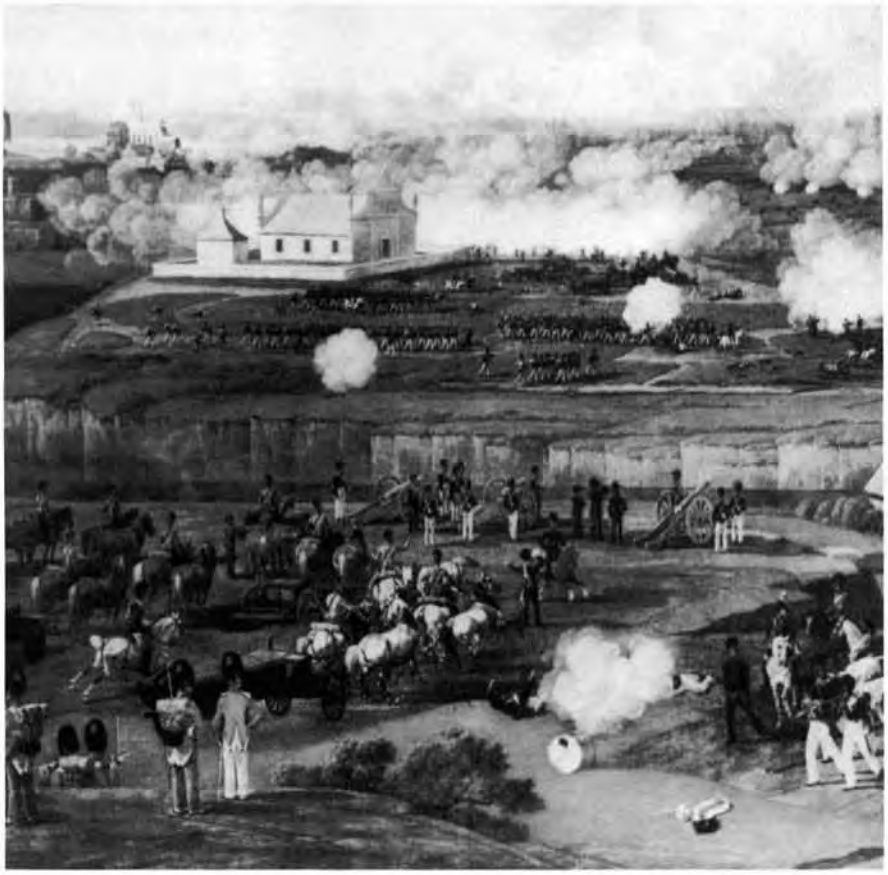
If the use of artillery at Friedland in 1807 had been spectacular, its employment at Wagram in July 1809 was superb. After the defeat at Essling on 21 and 22 June, the French were forced to retire across the Danube and, luckily for Napoleon, Archduke Charles made no move to take advantage of the situation. At Wagram, on 6 July, the battle opened at four o'clock in the morning and again the Austrians at first appeared to have the upper hand. Everywhere the French were forced to give ground. Napoleon reinforced Masséna and Bernadotte and sent forward the entire Artillery of the Guard. Six foot-batteries and six horse-batteries of the Guard and five horse-batteries of the Line formed in column, received the order '*En avant, en batteries!*' (Forward by battery!) and on a front of about 2,000 yards a hundred cannon cut down the Austrians with deadly accuracy, opening the way for the infantry. By three o'clock the Austrians had lost the initiative. The decisive charge of the artillery had won the day. During forty hours nearly 1,100 pieces of artillery of both sides battered one another, the French alone firing 100,000 rounds of various types of ammunition. However, Wagram could never be considered a second Austerlitz. With trouble in Spain still continuing, the Emperor decided that Wagram had ended the campaign and a peace was signed on 11 July 1809.

Spain continued to be a problem for the French and demanded the attention of large numbers of troops and much-needed artillery, but Napoleon was content to consider it a side show and only once visited the country. He preferred to concentrate on Central Europe and Russia. British sea domination had forced Napoleon to look east for territorial gain and there he saw the vast expanse of Russia stretched before him. The Tsar's refusal to be subservient to Napoleon's wishes and demands was eventually voiced in the words 'I or Napoleon, we cannot both rule at the same time. . . .' In March 1812 Napoleon joined his *Grande Armée* at Dresden, and the Tsar joined his at Vilna; 'This was the first move in the great game of chess in which the interests of all Europe were involved', wrote Sonia Howe in *A Thousand Years of Russian History* (1917).

Napoleon crossed the Niemen river on 24 June; half a million infantry, 80,000 cavalry and nearly 600 guns drawn from France, his Italian kingdoms, the Grand Duchy of Warsaw, the Con-

Above: French artillery in action at the siege and capture of Tarragona 29 May 1811. Note that in this artist's impression, the artillery are placed much too close to the walls. (National Army Museum)

Right: Bavarian troops including artillery at the battle of Polotsk, August 1812. Note the two gun and one howitzer battery in the foreground complete with its complement of teams and ammunition wagons



A gunner of the French Horse Artillery. This engraving shows the various parts of the uniform, as well as the sword and pistol with which the gunners were armed. (National Army Museum)

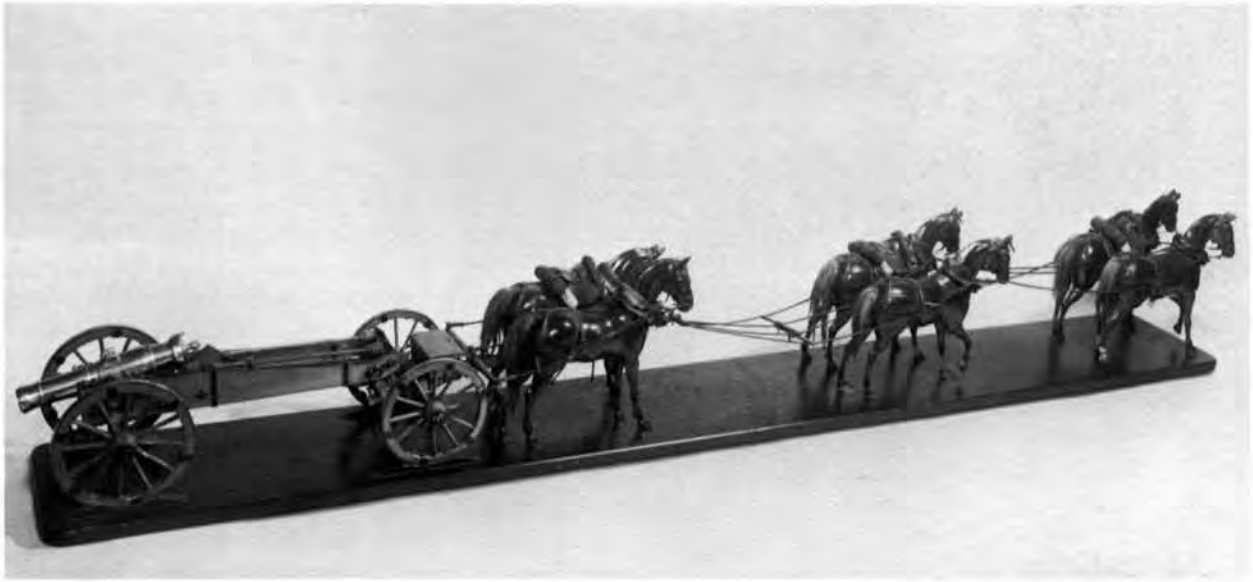
federation of the Rhine and other allies accompanied the Emperor. The Russian generals, against their will, wisely retreated and drew Napoleon's troops into the interior of Russia. Movements were slow as the roads were bad and the artillery suffered as a consequence. Horses were dying, but the French hoped to replace them as was their usual practice by requisition in an enemy country. The French and Russians clashed at Krasnoe on 14 August, the day following Napoleon's forty-third birthday, and at Smolensk on 16, 17 and 18 August in a stalemate battle similar to Eylau.

At Borodino on 6 September Napoleon caught up with the Russian forces. That night, for the first time French troops dined off dead artillery horses; it was an ominous sign of what was to come. On the following morning at 5.30 an artillery battery of the Guard opened the bombardment, followed by the deafening roar of the three massed batteries of the French artillery, directed at the great redoubt the Russians had thrown up at Borodino: a total of 587 heavy field pieces. The infantry assaulted and captured the redoubt but a violent Russian counter-attack was only halted by disciplined use of the French batteries. When Murat led his Cuirassier charge, a hundred horse-artillery pieces galloped to his aid. At the end of a day of heavy and continuous bombardment, Napoleon united his entire artillery effort and blasted the Russians from the field. '*Puisqu'ils en veulent encore*' said the Emperor, '*donnez-leur en.*' (As they seem to want more, give it to them.) For the French it was a resounding victory which opened the road to Moscow, but to some it was a disquieting victory, even though 587 French guns manned by 16,000 artillerymen had outgunned 640 guns manned by 14,000 artillerymen. The Russians now fell back to defend Moscow, but the question was asked, was it necessary to sacrifice the last remaining army in Russia to protect the city? 'It would be glorious to die under Moscow' wrote a Russian artillery officer, 'but it is not a question of glory.'

Although the French occupied Moscow the inhabitants set the city on fire. Unable – because of the cold and lack of supplies and horses – to maintain such an advanced position, Napoleon retreated. It was the beginning of the end. In the

disastrous retreat thousands died of frostbite and cold, artillery was abandoned because there were no horses left to pull it (the Polish artillery, however, managed to save a large part of their equipment) and there was nothing to eat, the Russians having forced the French to revert to the areas of countryside already laid waste. It was a general signal for Europe to rise against the Emperor, and slowly the Allies closed in. At Leipzig, on 18 October 1813, despite massed batteries and a tremendous bombardment, the French were beaten. France, for the first time in many years, was threatened and had to be defended. Artillery was massed on the frontiers to repel the invaders, but in vain. Despite the campaigns of 1813, and that of the early months of 1814, French troops were forced back from the east by the Russians, Prussians and Austrians and from the south by Wellington and his Peninsular army. On 30 May 1814 Napoleon abdicated, and was sent to the small island of Elba.

Uniform of the *Ecole Polytechnique*, the leading French artillery school. The figure shown is in *tenue de ville* or walking out dress



12 pdr gun, limber and team, complete with harness and equipment. This model was presented by Czar Nicholas to the King of Sweden. It is typical of the artillery in use during the Napoleonic wars and shows the method of limbering and harnessing. (Kungl. Armemuseum)

Waterloo Campaign 1815

On 20 March 1815 Napoleon, who had landed at Antibes from his exile on Elba, entered Paris. This time he wanted peace, but the Allies, wary of Napoleon's power and ambitions, decided on war. Amassing men and equipment, recalling the National Guard, the veterans and garrison gunners, he re-formed his artillery, his most important tool. '*Il faut du canon partout*', he wrote, '*on se bat a coups de canon comme on se bat a coups de poings.*' (We must have ordnance everywhere, one fights with artillery as one would with one's fists.) The Imperial Guard Artillery was reconstituted, consisting of nine foot-batteries, four horse-batteries and four batteries of the Young Guard with 126 pieces.

In the north, Napoleon was opposed by the Anglo-Dutch army under the Duke of Wellington and the Army of the Rhine under Marshal Blücher. Napoleon planned to destroy each separately before they could unite and before other allies came to their aid. On 15 June the French crossed the Sambre at Charleroi on a five-mile front and on the following day attacked the British at Quatre Bras and the Prussians at Ligny. The Prussians were beaten and withdrew; the British held their ground but retired the following day and formed up on the ridge of Mont St Jean near the insignificant village of Waterloo. Napoleon had detached 32,000 men and 96 pieces of ordnance to pursue the Prussians to prevent them from re-joining their allies.

On the morning of 18 June 1815 the British artillery was drawn up on the forward slope of the ridge while the infantry, in typical Wellington fashion, were ordered to position themselves on the reverse slope to lessen the effects of the inevitable French artillery bombardment. 'The coming battle' said Napoleon, 'will save France and be renowned in history. I shall bombard them with my great weight of artillery, I shall charge them with my cavalry, so that they will show themselves. . . .' Napoleon was superior in artillery, 266 pieces against 96 manned by the

French foot artillery gunner of 1812. Note the shako and plate and the short brass hilted sword or *briquet*. The plate gives some idea of the size of a gun wheel compared with the height of a man. (National Army Museum)

Royal Artillery and 156 manned by their allies, but he was in no hurry to open the battle, the wet state of the ground after the night's torrential rain making it difficult to position his batteries early.

At 12.20, 80 French guns opened fire, having been positioned on the forward slopes with some difficulty. The shots were not as effective as was hoped, the round shot falling in the mud and not rebounding and the shells burying themselves before exploding. Even so many were finding their mark. Twenty-four of the French pieces were the dreaded 12 pdrs with an accurate range of 2,000 yards. The bombardment took away the breath of the young soldiers and even startled the Peninsular veterans by its intensity, but little

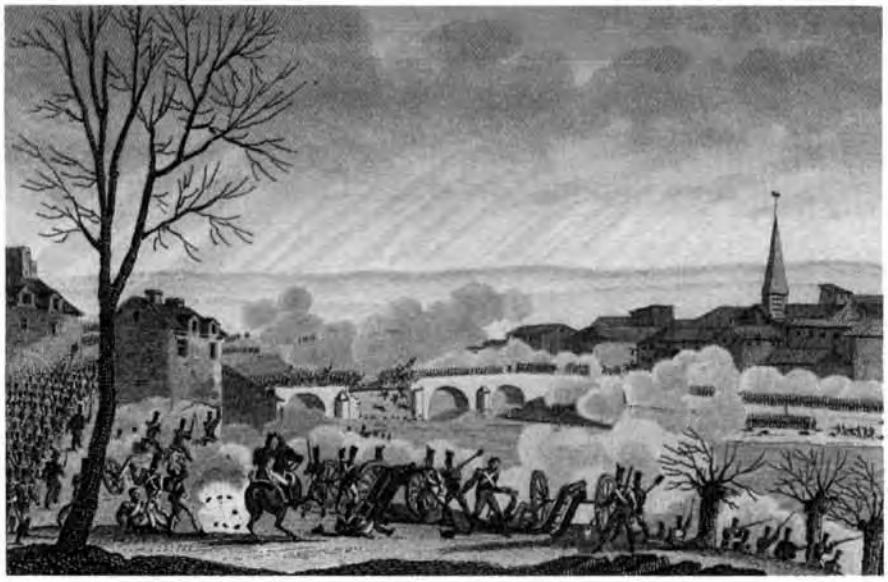
French officer of Foot Artillery 1812. Plate from *The Military Costume of Europe* **published by T. Goddard. Cocked hats were not always worn and shakos were common head dress. (National Army Museum)**

harm was done except to a brigade of Belgians who had been drawn up in the Continental fashion on the forward slope.

At 1.30, as a prelude to D'Erlon's attack on Wellington's left centre, the bombardment recommenced. 'The gunners were standing in line' wrote a French officer, 'inserting the charges, ramming them home, swinging the slow matches to make them burn more brightly. They seemed to move as one man. Behind them stood the captains of the guns; nearly all of them were elderly and they gave their orders as if on parade. Eighty guns fired together, blotting out every other sound. The whole valley was filled with smoke. A second or two later, the calm clear voices of the captain could be heard once more, "Load! – Ram! – Arm! – Fire!". This continued without break for half an hour. We could scarcely see our comrades but across the valley, the English had also opened fire. We could hear the whistle of their cannon balls in the air, the dull thud as they struck the ground and that other sound when muskets were smashed to matchwood and men hurled twenty paces to the rear, every bone crushed, or when they fell with a limb gone.'

Hougoumont was soon under severe pressure from infantry and horse artillery. The French rode up to within 300 yards and unlimbered, but they did not reckon on the accuracy of the defenders' Baker rifles. 'We destroyed all their

French artillery in action at the battle of Montereau, 28 February 1814. Hoping to beat his enemy between his position and the river Seine, Napoleon had ordered Marshal Victor to destroy all the bridges, which unfortunately was not carried out. The Emperor arrived as the Austrians were crossing the bridge and from the vantage point overlooking the town where the artillery were positioned, aided the gunners in serving their equipment. It was on this occasion that Napoleon made his famous remark, *'. . . le boulet qui doit me tuer n'est pas encore fondu.'* **(The bullet that can kill me has not yet been cast)**



artillerymen before they could give us a second round', remembered a rifleman. D'Erlon's attack on the left-centre was repulsed with heavy fighting, Lord Uxbridge leading the Household and Union cavalry brigades in pursuit. The Union Brigade over-reached itself and charged almost up to Napoleon's position. Colonel Hamilton cried to the Scots Greys, '"Charge! Charge the guns," and went off like the wind up the hill,' wrote a survivor of the charge, 'towards the terrible battery that had made such deadly work amongst the infantry. It was the last we saw of him, the poor fellow. . . . Then we got amongst the gunners and had our revenge! We sabred the gunners, lamed their horses and cut the traces and harness. I can hear the Frenchmen crying "Diable!" when I struck at them, and the long drawn out hiss through their teeth as my sword went home.' The French cavalry counterattacked and the Union Brigade suffered such severe casualties in the retirement that they were of no further use to Wellington.

After a slight pause in the action, the French gunners opened another barrage before a further attempt at breaking the Allied centre. The accuracy of the fire was impressive and Wellington

Driver of the Train of Artillery 1815. Note the horse equipment and the gun limbered to the single axle by its trail. After V. Adam (National Army Museum)

withdrew his infantry a further hundred yards behind the crest, while the French once more surrounded La Haye Sainte, held by riflemen of the King's German Legion. This withdrawal was taken by Ney to be a retreat and as the French artillery fell silent, to the relief of the British infantry, Ney ordered forward 5,000 of the finest cavalry in Europe. As they charged up the slopes the British artillery loaded case and round shot, one in front of the other, and as Mercer wrote, 'Every man stood steadily at his post, the guns ready . . . the tubes were in the vent; the port-fires glowed and spluttered behind the wheels.' Five times the French charged and five times they were driven back. As they retired the British gunners emerged from the safety of the squares and the French artillery recommenced their pounding of the Allied positions.

The battle continued unabated for the rest of the afternoon, Napoleon attempting to break the Allied line and Wellington holding on, awaiting the promised arrival of Blücher. The French artillery fire took on a new intensity as Napoleon reinforced his mass batteries directed at the centre, trying to blast a hole for the infantry and cavalry. The fire was crippling. By

The charge of the Union Brigade, a print after the painting by Dupré. '"Charge! Charge the guns," and went off like the wind up the hill towards the terrible battery that had made such deadly work amongst the infantry . . . We got amongst the gunners and had our revenge.'

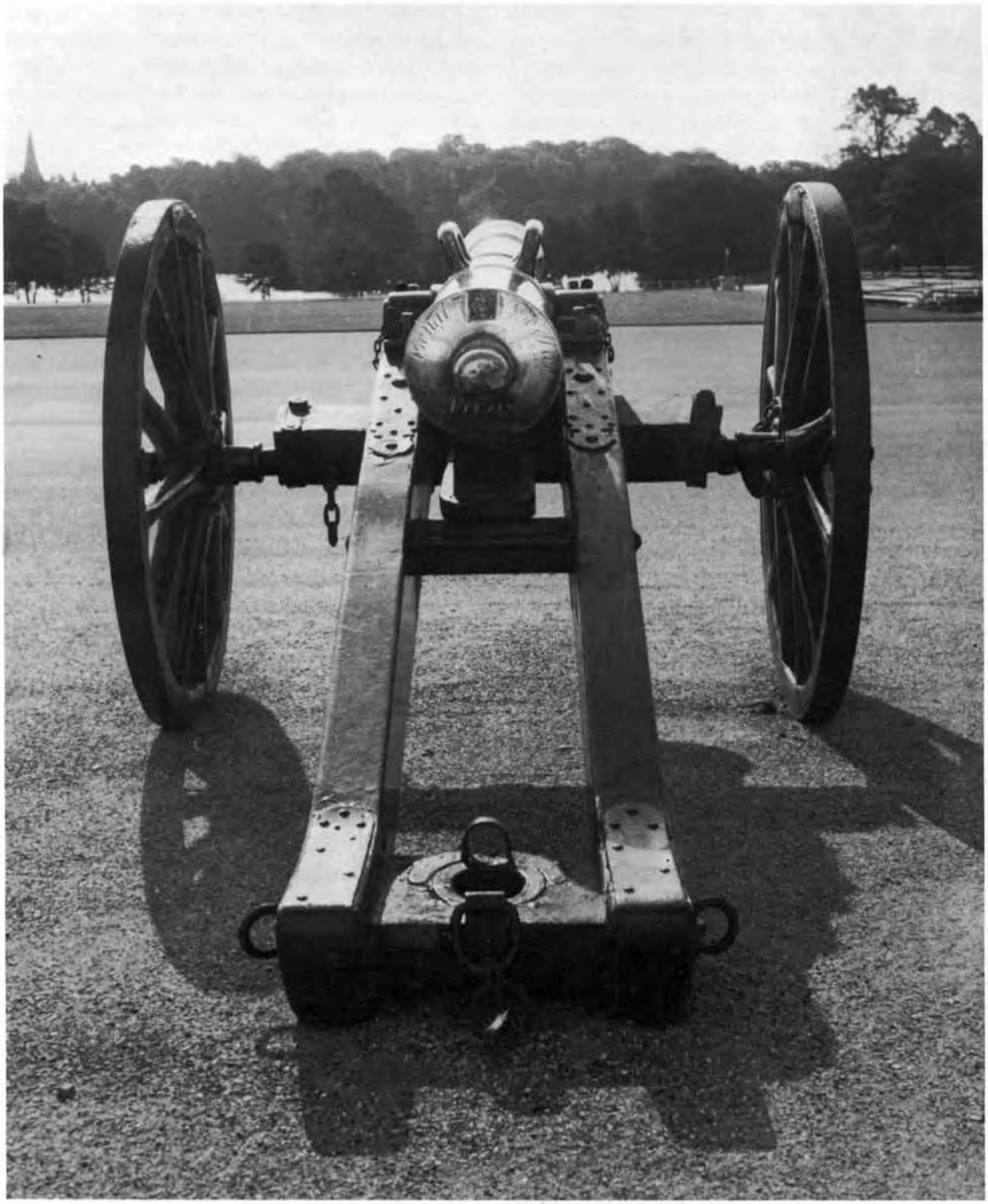
the crossroads 450 of the 700 men of the 27th Foot eventually lay in their square where they had fallen, while other regiments fared little better. 'Hard pounding this, gentlemen' remarked the Duke, 'but we will see who can pound the longest.'

Eventually Napoleon launched his Guard, who had been inactive all day despite Ney's plea for more troops. The Imperial Guard failed in their last desperate bid to break the line; sent reeling back by the 1st Foot Guards, they were eventually broken by the 52nd Regiment. The general cry of '*La Garde recule*' (The Guard retires) was taken up in the French army and except for a spirited stand by some elements which covered Napoleon's escape, the battle was virtually over.

After the battle Wellington wrote to Lord Beresford, who had won the narrow victory of Albuera in the Peninsular War in 1811, 'Never did I see such a pounding match. Both were what boxers call gluttons. Napoleon did not manœuvre at all. He just moved forward in the same old style and was driven off in the same old style. The only difference was that he mixed cavalry with his infantry and supported both with an enormous amount of artillery!' The French lost or abandoned 250 pieces of artillery in the campaign, although Grouchy – who had pursued Blücher – managed to save some of his.

The French artillery and Napoleon's skilled use of it had been one of the greatest factors in France's twenty-year series of victories. The key to the advantages he obtained from it, even though often outnumbered, was the positioning of his massed batteries at exactly the right place in his overall battle plan.

'The battle of Waterloo' by Sir William Allan R.A. Napoleon on the right surveys the battlefield while the artillery in front of him continues to load and fire. Note the gunners ramming home the charge and projectile and the non-commissioned officer 'serving the vent' with his thumb. To the right, a gunner places the portfire into the vent field to fire the piece. (Wellington Museum, London)



One of the French cannon captured at Waterloo. Note the weight and size of the trail and the rings at the rear for the handspike and the hole in the trail for limbering up. This piece now stands before the Royal Military Academy at Sandhurst. Note that the wheels are of a later and British pattern. (National Army Museum)

The Plates

A1 Gunner, Foot Artillery, 1804
The French, like most artillery in Europe, were dressed in a blue uniform, which had changed little since the French Revolution and the period of the Consulate. The bicorn hat was worn across the head and adorned with a scarlet plume and cockade in national colours. The coat was blue with red piping and round cuffs with blue flaps and brass buttons. The front, as in the coat worn by other arms, was cut away to show the waistcoat. The turnbacks were red, decorated with blue cloth grenades, and as nether wear blue breeches with white gaiters or 'spatterdashes' and black boots were worn. White infantry-style crossbelts holding ammunition pouch and bayonet as well as a short sword or *briquet* were issued, together with a musket.

A2 Gunner, Foot Artillery of the Line, 1807
The uniform differed little from that worn in 1804, except that the collar was now closed at the front and high white or black gaiters were worn, the former for parade and the latter for service. The cocked hat was replaced by a black shako with scarlet trim and plume, a cockade, and chinscales in brass. The brass plate was diamond-shaped and displayed a crowned eagle over crossed cannon and the number of the regiment. The pack was in natural cowhide and a rolled coat was strapped to the top.

A3 Officer, Horse Artillery, 1804
The French horse artillery was formed in the early years of the Revolution, and followed the unwritten law of all horse artillery with regard to uniform, which decreed that they should adopt a hussar style to emphasise their dash and alacrity. The early uniform comprised a black shako suitably adorned with scarlet trim, cockade and plume. The heavily laced dolman was blue with scarlet-piped collar, pointed cuffs and frogged front, while the pantaloons were blue with a scarlet stripe down the outer seam of the leg, passing over the seat at the rear. Chevrons on the front thigh denoted ranks. Boots were 'Hessian' or hussar pattern with top edge in scarlet braid adorned with tassels. A barrel sash in blue and red encircled the waist and white crossbelt and sword belt suspended respectively a pouch and a brass hilted sabre and sabretache on the left side.

B1 Officer, Horse Artillery of the Guard, 1807
This arm of Napoleon's Guard copied their uniforms from their Line counterparts but with certain refinements. The busby was in black fur with scarlet bag, trimmed in gold with a scarlet plume. The dolman was in blue with a gold-laced collar, pointed cuffs edged in lace according to rank and a heavily gold-frogged front. The pantaloons had chevrons on each thigh denoting rank and were worn with 'Hessian' boots trimmed in gold lace. The pelisse, worn in this case over the left shoulder but equally useful as an 'overcoat', was decorated in similar fashion to the dolman but with grey fur down the front, around the bottom and on collar and cuffs. The crossbelt in red leather was adorned with gilt wire embroidery, as was the sword belt.

B2 Sergeant-Major, Horse Artillery of the Guard, 1807
The sergeant-major wears in this instance a cocked hat and a long blue riding coat over his uniform. The coat was double breasted with gold trefoil shoulder straps and an aiguillette on the left. The badges of rank – laced chevrons – were worn on the cuff. The white sword belt worn over the coat suspended a brass-hilted sabre on the left side.

C1 Pioneer, Foot Artillery of the Guard, 1809
The pioneer or *sapeur* was an essential artificer in any army on campaign. In the Foot Artillery of the Guard the uniform comprised a black busby with scarlet bag, a blue coat piped in scarlet and scarlet worsted epaulettes with the 'trade' badge of crossed axes with grenade above on the upper arm. The usual crossbelt equipment was worn, the belt over the left shoulder being adorned with crossed axes in brass. The white waistbelt had a plate bearing a grenade; in common with pioneers of other armies, a white apron was worn and a various tools such as axes, saws and billhooks were carried.

C2 Driver, Artillery Train of the Guard, 1809

The drivers wore a steel grey coat, waistcoat, breeches and black shako with scarlet trim, brass chinscales and a plate showing a crowned eagle on crossed cannon over a tablet inscribed 'N'. The coat was piped in scarlet and cut away at the front to show the waistcoat frogged in scarlet cord. The breeches had elaborate 'Austrian' knots on each thigh and trefoil shoulder knots were fitted to the coat. A white crossbelt adorned with a grenade held a black pouch at the back while a *ceinturon baudrier*, a waist belt adapted for shoulder wear was worn over the right shoulder.

C3 Gunner, Foot Artillery of the Guard, 1808

The gunner is shown in fatigue dress or *tenue d'exercise* consisting of a 'bonnet de police' in blue piped scarlet and a blue sleeved waistcoat and blue trousers. The usual crossbelt equipment was worn, and some gunners carried a cowhide haversack in addition, containing tools for the guns.

D and E Gunner, drivers and four-horse team with 12 pdr gun and limber, Foot Artillery of the Line, 1810

The 12 pdr was the largest calibre field gun in use in the French artillery, with a range of just over 1,100 yards. The cast brass barrel was mounted on an olive drab (dirty green) painted 'double bracket' trail carriage which in turn hooked to a single axle limber without ammunition boxes. A small ammunition chest for immediate use was carried between the trail but the main supply accompanied the piece in other wagons. The horses were harnessed to a single central pole by means of straps, chains and wood collars. The drivers, men from the Train of Artillery, wore a steel blue coat with dark blue collar, lapels, cuffs with steel blue flaps, and shoulder straps. The breeches were buff coloured and worn with heavy reinforced riding boots. A short sword carried in a baldric over the right shoulder and a black pouch was fitted to a white belt worn over the left. The saddle cloth was a steel blue rear housing with a white sheepskin front edged in blue cloth with 'vandyked' edge. A square-sectioned valise was worn behind the saddle. The gunner in this case wears the shako with oiled skin cover, whereas the drivers have theirs uncovered showing the white cording and silver fitments. The gunner wears a great coat with cape in dark blue and overalls in blue with scarlet stripe, buttons, and brown leather reinforcement.

F1 Musician, 9th Regiment, Foot Artillery of the Line, 1811

The 9th Regiment was peculiar in that it dressed its musicians in the unique fashion shown. In place of other head dress a lancer-style cap was worn with scarlet squared top edged in gold lace, and a central band of gold lace at the 'waist' above the black leather body. The cords were in gold and the plate, sunray design with silver centre, bore the initial 'N'. The coat was scarlet with blue collar, front and round cuffs worn over blue waistcoat and breeches and cavalry style boots. The white crossbelt retained by a gold trefoil shoulder cord suspended a short sword.

F2 Drummer, Foot Artillery of the Line, 1812

Up to 1812, drummers had been dressed in the same way as gunners with the addition of various gold lace distinctions to coat and shako, but in that year the scarlet coat which had ousted the blue one in 1807 was in its turn replaced by the one shown here. This was in the colours of the Imperial livery decreed by Napoleon. The green coat was decorated, as was the practice for drummers in many armies, with chevrons and bars of lace on the arms and chest. The Imperial lace used had a yellow background with scarlet edge top and bottom, and alternate designs of the Imperial 'N' and eagle. It was so made and sewn to the coat that the 'N' and eagle were always upright. A white crossbelt suspended a brass-hilted short sword, and the brass drum with blue hoops and white cords was held by a white belt that passed over the right shoulder and was ornamented with a brass plate in which the sticks were carried. A knee apron was also worn to prevent the drum from causing wear on the breeches. The drum had two white straps beneath by which it was carried on the back, like a knapsack, during the march.

F3 Gunner, Horse Artillery of the Guard, 1811

The gunner is shown in full dress wearing the black busby with scarlet plume, adornments and

bag. The dolman was blue with scarlet-piped collar and frogged front. A yellow and scarlet worsted barrel sash encircled the waist and the white crossbelt was retained by a trefoil cord shoulder knot. The breeches in blue were decorated with scarlet 'Austrian' knots on each thigh. The white waistbelt suspended the light cavalry style sabre and the sabretache on the left hip. The sabretache had a blue cloth face edged in yellow lace with a crowned eagle over crossed cannon in the centre.

G1 Driver, Artillery Train of the Guard, 1812
The driver is shown in *tenue de route* (marching order) comprising the shako in oiled skin cover surmounted by a scarlet ball tuft and a short, sleeved waistcoat in steel blue with plain cuffs. The overalls were in the same colour material and reinforced on the inside of each leg and around the bottoms with black leather. A crossbelt worn over the left shoulder supported a pouch on the back and a sabre was suspended from a waistbelt.

G2 Gunner, Horse Artillery of the Line, 1812
The gunner wears the short *habit kinski* adopted in 1812 with scarlet patches to the collar and fringed epaulettes. The shako was trimmed with scarlet cord and flounders and the top edge was encircled with a scarlet band of lace and decorated with a national cockade and cord loop. The overalls or *pantalons à cheval* were buttoned on the outside of the leg and reinforced on the inner side and around the bottoms with black leather. The waistbelt suspended a sword and the crossbelt a pouch in the centre of the back.

G3 Driver, Artillery Train of the Line, 1813
Drivers still wore the steel blue coat with blue collar and round cuffs with steel-blue flap and white metal buttons. The turnbacks were also dark blue edged white and adorned with embroidered grenades in white. The breeches were dark buff and worn tucked into heavy riding boots. The shako was black with steel-grey ball tuft and white metal chinscales and plate. White crossbelts suspended a short sword and a black pouch.

H1 Officer, Horse Artillery of the Line, 1813
The officer shown wears the heavy riding coat and cape in dark blue cloth. This garment was often used on campaign. The lower edge of the cape was trimmed in gold lace and helped to distinguish an officer. The cocked hat, which was often worn, had gold wire 'pulls' and scarlet plume. The blue pantaloons were decorated with rank chevrons and the black boots trimmed in gold lace.

H2 Gunner, Foot Artillery of the Line, 1815
This figure shows the appearance of a gunner during the 'Hundred Days'. The shako is simple, without cording and with a small triangular plate, although many gunners who retained their old plates wore them. The short coat, closed to the waist, was in blue and piped scarlet with the same colour turnbacks adorned with blue cloth grenades. Fringed epaulettes were worn by those who had them, but shoulder straps were more common. Blue breeches were worn with black knee gaiters, and the rest of the equipment was as before.

H3 Gunner, Foot Artillery of the Guard, 1814
The bearskin cap was peculiar to the artillery branch of the Guard, with its brass chinscales, black leather peak, red cloth patch and gold embroidered grenade. It was an imposing headdress destined to be copied by many armies, with its scarlet plume on the left side fitted in a national cockade. The long coat continued to be worn by the Guard after 1812 when the shorter coat was issued; it was piped in scarlet with scarlet cuffs and turnbacks, worn over a blue waistcoat and breeches. White gaiters were worn (black on service) as were the usual crossbelt arrangement and a knapsack on the back with rolled coat. The short sword or *briquet* had a scarlet sword knot.

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